Ontario Tree Atlas Project

A participatory science survey of Ontario's tree species (1994 - 2006)

University of Guelph Arboretum



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Contents

Introduction

The Ontario Tree Atlas Project (OTAP) began in 1994 with the goal of producing a refined understanding of the distribution and abundance of the tree species growing across our large and diverse province. From the time of the project's inception to today, the distribution and abundance of Ontario's trees have never been comprehensively determined, and the species range maps used in books and guides remain largely generalized. Unlike field guides, which are intended to assist with species identification, this Atlas focuses on the geographical ranges of tree species, specifically. The Tree Atlas may therefore serve as a complementary companion to the excellent collection of field guides that have been published about the plants of Ontario (e.g., *Trees of Canada*, *Trees of Ontario*, *Trees of the Carolinian Forest*). It is, ultimately, the result of extensive surveying and counting of trees that was made possible by the coordinated efforts of over 1,300 volunteers. Project volunteers contributed 16,000 hours of their time between 1995 and 2006 to collect over 63,000 species location and abundance records for 111 of Ontario's provincial trees. In total, tree species data are available for 1,981 "survey squares," each measuring 100 km^2.

This publication represents the first time that the information from the Ontario Tree Atlas Project has been presented in a comprehensive manner. After a delay of several years due to problematic, archaic data software, a renewed effort began in 2019 to compile and present the results of the surveys to the public. Despite its vintage, the long lifespans of most tree species are such that the data in the Tree Atlas may still find relevance at the time of this publication; however, the reality is that while the data have remained static over intervening years, the actual landscape of the province has continued to change. For instance, current species distributions may differ from the Tree Atlas surveys due to the effects of climate change, natural disturbances, insect outbreaks, and changes in land use. In an effort to address these effects, we have indicated, wherever possible, when a species is known to have undergone significant changes in its distribution or abundance. The passage of time makes the dataset an excellent reference point for future re-survey efforts. As new technologies such as iNaturalist and others now enable participatory science activities and data sharing to a greater degree than ever before, we hope that the Tree Atlas records will provide a valuable point-in-time benchmark for future surveys as our dynamic forests continue to change.

Detailed information about tree occurrences is an essential part of successful conservation and land management. In the following sections, we first describe the methods used to conduct the original Tree Atlas surveys; we then present a series of maps that depict the distribution and abundance of tree species as observed by project volunteers. It is our hope that this publication will prove useful for a wide range of educational and research purposes, and that it might also assist with conservation efforts for tree species in Ontario.

Ontario Tree Atlas Project Survey Methods

Survey grid and coverage goals

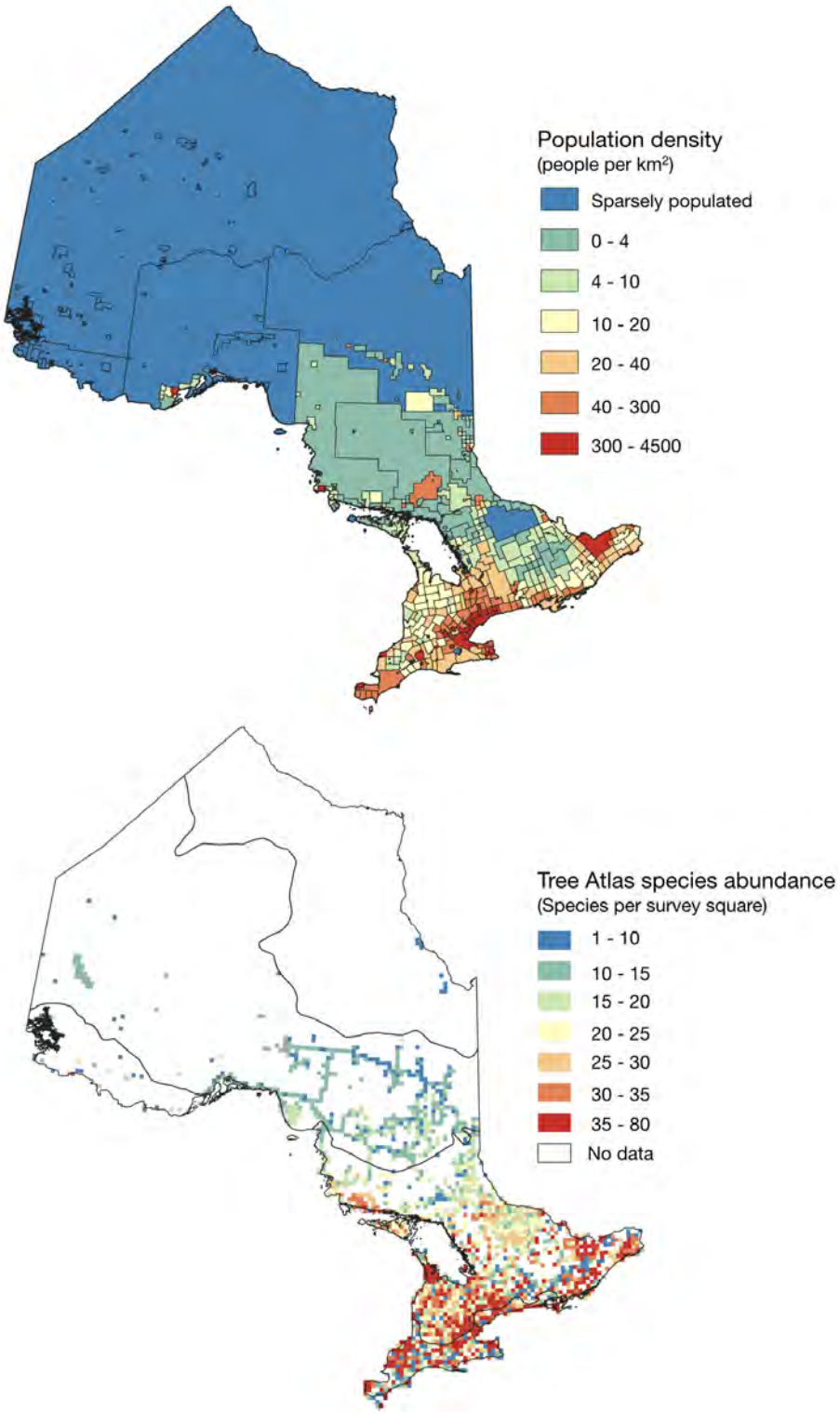
The methods used to create the Tree Atlas follow models of previous faunal surveys conducted in the province, including the *Atlas of the Breeding Birds of Ontario* and the *Atlas of the Mammals of Ontario*. As in these examples, data for the project were collected within a provincial grid of survey squares. The Tree Atlas survey squares were derived from the North American Datum (NAD) 1927 Universal Transverse Mercator (UTM) Zone 17N coordinate system. The UTM grid was first divided into large 100 km x 100 km squares within which 10,678 smaller, 10 km x 10 km, survey squares were nested. The intention of the nested grid system was to achieve adequate survey effort across the province by ensuring that a minimum number of smaller squares were surveyed within each larger block.

Several factors presented a challenge for obtaining equal survey coverage of the province. Ontario has a large land mass (1.08 million km^2) and low population density (14.1 individuals per km^2), with the population disproportionately concentrated in the southern regions of the province (Map Set 1). Cadman et al. (2007) described the regional differences in access to survey squares noted during the development of the *Atlas of the Breeding Birds of Ontario*:

> "South of the Shield almost all of the squares are accessible by road, with the exception of a few on the Great Lakes or the St. Lawrence River that are accessible by boat. On the Southern Shield most squares are road accessible, with only a few requiring access by canoe, or in the case of Georgian Bay and northern Lake Huron, by boat. Approximately 60% of the 100-km blocks in northern Ontario have roads in them, and varying numbers of squares have roads. Generally more squares in the southern part of the Northern Shield region have road access. However, some are private or limited-access logging roads inaccessible to atlasers."

Similar access issues were faced during fieldwork for the Tree Atlas, which is reflected in the limited number of survey squares visited in northern Ontario (Map Set 2). For the sake of clarity, the distribution of visited survey squares is presented alongside each species distribution map included in this publication.

Targets were set early on for obtaining adequate spatial coverage and survey effort to account for differences in population density and accessibility. A goal was presented to have atlas volunteers spend at least 20 to 30 hours of survey time in each 10 km x 10 km survey square in southern Ontario; to obtain 20 hours of coverage in five 10 km x 10 km road-accessible areas of northern Ontario within each larger 100 km x 100 km block; and to obtain a minimum of 50 hours of coverage in each 100 km x 100 km block in the far north of the province. Incidentally, the increased effort made possible in southern Ontario by the greater ease of access and larger potential volunteer base aligns with the latitudinal trend in biodiversity that occurs in the province. Generally speaking, the diversity of vascular plants declines with increasing latitude in Ontario, such that increased survey effort in the south is warranted to capture the occurrence of less common species (Map 1). With these goals established, data collection by project volunteers began in 1995 and was largely complete by 2000. Arboretum staff continued to conduct surveys in targeted areas (e.g., to fill gaps; visit underrepresented areas) until 2006.



Map Set 1 Both population density and tree species abundance decrease with latitude in Ontario (population density data: Statistics Canada 2020).

Data collection

To begin, OTAP participants were encouraged to familiarize themselves with their survey square(s) by travelling the roads ahead of conducting species surveys. This was intended to help volunteers gain a sense of the types of trees and their general abundance in the survey area. It was also recommended that each volunteer visit as many different habitat types within their survey area as possible to capture the full range of species present. Since the focus of the project was on non-planted, naturally occurring trees, volunteers were encouraged to concentrate on natural areas.

Atlas participants were provided with data collection forms and a copy of *A Manual for Collecting and Submitting Data* that summarized the methods of the Ontario Tree Atlas Project. Species surveys were largely undertaken on foot, with volunteers identifying and tallying species occurrences in the field with the help of species identification guides. Volunteers were asked to use a Square Survey Form (SSF) to collect information about the identity and abundance of tree species growing within their survey square(s), with the focus limited to a predefined list of species. Volunteers were asked to differentiate whether the observed individuals appeared to be planted or non-planted. The abundance of each species within a survey square was classified as one of three categories:

Abundance level	Number of individuals per 100 km^2
Low	Between 1 and 20 individuals within the survey square
Moderate	Between 20 and 100 individuals within the survey square
High	More than 100 individuals within the survey square

These broad categories were selected to account for the challenges of counting each individual tree within a relatively large area while still providing a general sense of the commonality of a species within a square. Throughout the course of the project, volunteer training and information sessions were held periodically at the University of Guelph Arboretum and at locations across the province. Volunteer regional coordinators assisted Arboretum staff with the organization of local survey efforts, and annual newsletters were mailed to project volunteers.

Difficult-to-identify species

For species that were considered to be difficult to identify, volunteers were asked to collect additional information. Volunteers were asked to submit a Sample Identification Form (SIF) and a sample collected from the tree. The following species required a SIF and sample:

- Black maple (*Acer nigrum*)
- Shellbark hickory (*Carya laciniosa*)
- American chestnut (*Castnea dentata*)
- Dwarf hackberry (*Celtis tenuifolia*)
- Pumpkin ash (*Fraxinus profunda*)
- White × red mulberry (*Morus alba* × *Morus rubra)*
- Red mulberry (*Morus rubra*)
- Red spruce (*Picea rubens*)
- Hill's oak (*Quercus ellipsoidalis)*
- Hawkins' oak (*Quercus* × *hawkinsii*)
- Shumard oak (*Quecus shumardii*)
- Crack willow (*Salix euxina*)

Samples were checked against herbarium specimens by three OTAP and/or staff at the University of Guelph Arboretum. The confirmation of the specimen's identity had to be unanimous in order for the data record to be accepted.

Rare species

Volunteers were asked to collect additional information about the location and condition of the following uncommon species that are of special interest:

- Pawpaw (*Asimina triloba*)
- Pignut hickory (*Carya glabra*)
- Shellbark hickory (*Carya laciniosa*)
- Dwarf hackberry (*Celtis tenuifolia*)
- Pumpkin ash (*Fraxinus profunda*)
- Blue ash (*Fraxinus quadrangulata*)
- Honey-locust (*Gleditsia triacanthos*)
- Kentucky coffee-tree (*Gymnocadus dioicus*)
- Butternut (*Juglans cinerea*)
- Tulip tree (*Liriodendron tulipifera*)
- Cucumber tree (*Magnolia acuminata*)
- White × red mulberry (*Morus alba* × *Morus rubra*)
- Black gum (*Nyssa sylvatica*)
- Pitch pine (*Pinus rigida*)
- Common hop-tree (*Ptelea trifoliata*)
- Hill's oak (*Quercus ellipsoidalis*)
- Pin oak (*Quercus palustris*)
- Shumard oak (*Quercus shumardii*)

These uncommon or rare species required a minimum of one Rare Species Documentation Form (RSDF) to be filled out and submitted to the appropriate Regional Coordinator. The purpose of the RSDF was to increase the collection of information on the distribution and relative abundance of specific rare species that could be of value for future conservation and recovery efforts.

Species susceptible to disease

An optional request was made for volunteers to write comments regarding the health of the following species known to be susceptible to disease:

- American chestnut (*Castanea dentata*)
- Butternut (*Juglans cinerea*)
- White elm (*Ulmus americana*)
- Siberian elm (*Ulmus pumila*)
- Slippery elm (*Ulmus rubra*)
- Rock elm (*Ulmus thomasii*)

We note that threats related to insects and disease have expanded to other tree species in Ontario since the Tree Atlas Project began. For instance, species of ash have undergone significant declines in recent years due to the impacts of emerald ash borer (*Agrilus planipennis*), which was first detected in Ontario in the early 2000s. Other emerging threats include dogwood anthracnose (*Discula destructiva),* hemlock woolly adelgid *(Adelges tsugae),* Asian longhorned beetle *(Anoplophora glabripennis)* and beech bark disease (*Neonectria faginata*).

Casual observations

Casual Observation Cards (COCs) in the form of pre-addressed postcards were available for atlas volunteers to use when they were outside of their assigned survey square(s). COCs enabled casual observations of tree species data to be easily submitted to the project and helped to improve the coverage of the Tree Atlas surveys.

Data submission

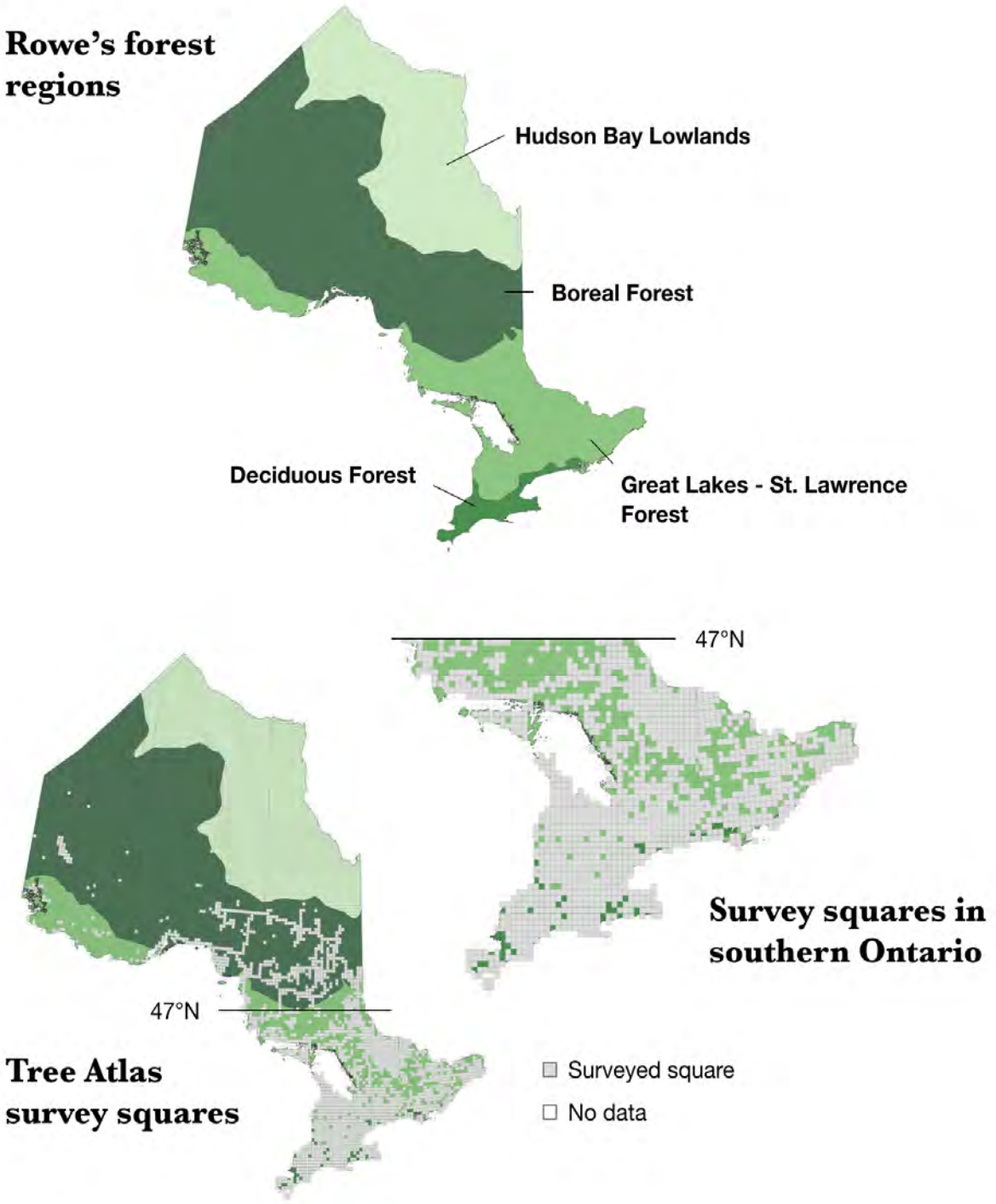
Volunteers were asked to submit their data by December 31 of each year. Square Survey Forms and Rare Species Determination Forms were submitted to Regional Coordinators, and Casual Observation Cards and Sample Identification Forms were submitted directly to the Tree Atlas project office at the University of Guelph Arboretum. Submissions were quality-checked and manually entered into the Tree Atlas database. Initially, it was intended for all fieldwork to be carried out during the original collection period of 1995 to 1998. However, to obtain a more comprehensive dataset, volunteers continued to conduct surveys until 2000, and surveying was continued by project staff until 2006. The database was solidified, or "locked," in 2007.

Summary of survey activities

The collection of survey data was largely successful in meeting the initial aims of the project, albeit with some of the limitations common to similar, volunteer-based projects. In particular, the most obvious shortcoming of the data collected is that it does not fully capture the distribution of trees in northern Ontario. Many of the survey squares in this area are inaccessible by vehicles, and the majority of survey squares visited in the north were located next to roadways. Tree Atlas surveys were fairly comprehensive below about 47°N latitude, which covers much of the Great Lakes – St. Lawrence and deciduous forest regions (see Map Set 2).

Forest region	Squares surveyed	Coverage
Hudson Bay lowlands	9 of 2,836	< 1%
Boreal	482 of 4,987	10%
Great Lakes – St. Lawrence	1,200 of 2,494	48%
Deciduous	290 of 361	80%
Provincial total	1,981 of 10,678	19%

Despite the overall success of the data collection phase, the timely publication of the results of the Ontario Tree Atlas Project has been hindered by a variety of factors. The delay between collecting and publishing the Tree Atlas data may raise some questions regarding how well it reflects current tree species distributions. Although local changes (i.e., within particular survey squares) in distribution and abundance are possible due to factors such as land use and climate change, the long-lived nature of most tree species is such that general patterns are likely still valid. An exception to this would occur for species that have been disproportionately affected by pests, disease and habitat conversion in the intervening years. Wherever possible, we have made note of these in the descriptions of affected species.



Map Set 2 Rowe's forest regions, Tree Atlas survey squares, and a zoomed-in view of survey squares in southern Ontario (below 47°N latitude). The majority of Tree Atlas surveys were conducted in the Great Lakes - St. Lawrence and deciduous forest regions of southern and central Ontario.

Interpreting Tree Atlas Maps and Species Pages

The following section of this publication contains the results of the Tree Atlas surveys for all tree species included in the project. Each set of "species pages" contain a short description about the species' distribution and abundance, a table containing information about the number and location of survey squares in which it was identified, and two maps depicting the occurrence of the species in Ontario. The following information may be helpful for interpreting the maps and tables in the Tree Atlas.

Forest regions

The forest regions used in the maps, tables and descriptions are helpful descriptors for referring to the major ecological regions of the province. We follow the divisions outlined by Rowe (1972) and divide the survey area into the deciduous, Great Lakes - St. Lawrence, and boreal forest regions for descriptive purposes (see forest regions in Map 2). The northernmost area of Ontario falls within the Hudson Bay lowlands; however, only 9 squares were surveyed in this region, so while it is shown on the species maps, there is insufficient information to provide statistics or discussion about species growing there.

Two maps are included with each species page: the first shows the occurrence and abundance of a given species across the entire province, and the second provides a zoomed-in view of the same information in southern Ontario (below 47°N). The more detailed view of southern Ontario is provided because that is where the most continuous survey coverage lies and because the ranges of many species are found within that area.

Species distribution tables

Each species page includes a table displaying the percentage of squares occupied by a species in each of the three surveyed forest regions. As Tree Atlas surveys were not able to be completed for all survey squares, the percentages are based on the number of squares occupied by a species out of the total number of squares that were actually surveyed.

For example: Balsam fir were observed to grow at high abundance in 466 survey squares in the boreal forest region. A total of 482 squares were actually surveyed by volunteers (out of a possible 4,957 squares in the region). Balsam fir are therefore listed as growing in high abundance in: 466/482 x 100% = 97% of squares surveyed in the boreal forest region.

As a final note on the presentation of species abundance data, it is important to clarify that the two lowest species abundance levels ("low" and "moderate") were grouped together for the final presentation of the survey results. This decision was made to address concerns that it may have been difficult to distinguish between these two abundance categories when estimating populations in the field. Species are thus presented as occurring at "low" (< 100 individuals in a survey squares) or "high" ($\geq$ 100 individuals) abundance.

Changes from the initial species list and missing species

After considering the final Tree Atlas surveys, some changes and omissions were made to the final list of species included in the atlas.

Hawkins' Oak (*Quercus* × *hawkinsii*)

Hawkins' oak, a hybrid of red oak (*Quercus rubra*) and black oak (*Quercus velutina*), was initially included on the list of 111 survey species for the project. However, after reviewing the final map for this species, it was clear that the species was not consistently identified by project volunteers (i.e., its known range in the province is much wider than what was reflected by the species map). This species is therefore not included in the final publication.

We note that several other hybrid oaks are known to occur or may possibly occur where the ranges of multiple species overlap. These include:

- *Quercus* × *bebbiana* (*Quercus alba* × *macrocarpa)*
- *Quercus* × *deamii* (*Quercus macrocarpa* × *muehlenbergii*)
- *Quercus* × *jackiana* (*Quercus alba* × *bicolor)*
- *Quercus* × *palaeolithicola* (*Quercus velutina* × *ellipsoidalis*)
- *Quercus* × *schuettei* (*Quercus bicolor* × *macrocarpa*)
- *Quercus* × *introgressa* (*Quercus bicolor* × (*Q. muehlenbergii* × *prinoides*)
- *Quercus* × *faxonii* (*Quercus alba* × *prinoides*)
- *Quercus* × *wagneri* (*Quercus bicolor* × *prinoides*)
- *Quercus* × *beckyae* (*Quercus macrocarpa* × *prinoides*)
- *Quercus* × *riparia* (*Quercus rubra* × *shumardii*)
- *Quercus* × *richteri* (*Quercus palustris* × *rubra*)
- *Quercus* × *fernaldii* (*Quercus rubra* × *ilicifolia*)
- *Quercus bicolor* × *muehlenbergii*
- *Quercus rubra* × *ellipsoidalis*

More effort to observe and understand these hybrid complexes would be a worthwhile pursuit for future studies.

Eurasian hybrid willow complex

The initial species list included several introduced and hybrid willows that the average volunteer may find quite difficult to distinguish (e.g., white, hybrid white, crack, and hybrid white × crack willows). After reviewing the final maps for these species, it was decided that they be combined and presented as a "Eurasian hybrid willow complex." The two native willow species, peach-leaved and black willow, maintain their own species pages in the Atlas.

Sweet crabapple (*Malus coronaria*)

Sweet crabapple is a native species that is known to occur throughout much of southwestern Ontario, though it is not particularly common anywhere within this range. Atlas volunteers did record observations for this species when data was originally collected for this project; however, upon close review, we did not feel confident that these reports accurately reflected the true distribution of this species in Ontario. For this reason, we excluded the map in this publication. Many volunteer reports had the range of sweet crabapple expanding quite significantly into central and eastern Ontario, and we suspect with high likelihood that these reports may have been misidentified observations of introduced species of *Malus* that have been planted or naturalized. Additionally, recent studies have verified instances of hybridization with domestic apples within the core of the previously known distribution, a factor which may negatively impact the abundance of this species moving forward.

Serviceberries (*Amelanchier laevis* and *Amelanchier arborea*)

Observations of smooth and downy serviceberries were initially recorded separately by project volunteers; however, an inspection of the reported ranges suggested that the species may have been incorrectly identified. As we were unable to verify the records with certainty at this stage, the data for these species are presented as a map of "tree-sized serviceberries."

Green and red ash (*Fraxinus pennsylvanica* var. *subintegerrima* and *Fraxinus pennsylvanica* var. *pennsylvanica*)

During original survey efforts, green and red ash were viewed as separate botanical varieties. In the years since the data were collected, most taxonomists have begun to lump these varieties together under the name 'red ash' (*Fraxinus pennsylvanica*). We have followed this norm in the Tree Atlas and present the data for the two varieties together.

Red mulberry and white × red hybrid mulberry (*Morus rubra* and *Morus alba* × *Morus rubra*)

Red mulberry is an endangered species in Ontario, in part due to extensive hybridization with the introduced white mulberry (*Morus alba*). Unfortunately, genetic analysis is often required to distinguish pure red mulberry from hybrid individuals due to close similarities in appearance. We have therefore chosen to show the distribution of red mulberry and white × red hybrids together on one map.

With these changes and removals to the original species list, the final publication contains information about 104 individual species or groups of species.

Missing species

As the Tree Atlas is otherwise inclusive of the majority of tree species in Ontario, it is worth mentioning several species that were not included in the initial surveys but are known to grow in the province.

- Ohio buckeye (*Aesculus glabra*) has a very limited natural distribution in the province that is confined to extreme southwestern Ontario. Other individuals and small populations have been linked to planted specimens.
- Cherry birch (*Betula lenta*), an endangered species in Ontario, has a very limited range in the province, and is only known to grow at two locations on the Niagara peninsula. It was not included in the original surveys, likely due to its very limited natural distribution.
- Swamp cottonwood (*Populus heterophylla*), which also has a limited known distribution, was only discovered in 2002 (Lambton County), after the majority of Tree Atlas surveys were conducted and finalized.
- Murray's birch (*Betula murrayana*) is a globally rare tree known only from a few individual wild specimens. Further surveys may uncover more specimens hiding in southern Ontario.
- Alaska paper birch (*Betula neoalaskana*) and heart-leaved birch (*Betula cordifoila*) have alternatingly been considered distinct species or lumped with paper birch (*Betula papyrifera*) as botanical varieties. They were not selected for independent surveys when the project commenced.

Accuracy of species reports

Some genera such as *Amelanchier* (serviceberries), *Crataegus* (hawthorns) and *Salix* (willows) are notoriously difficult to identify to the species level when observed outside of very specific periods of the

growing season (e.g., flowering and fruiting). Frequent hybridization between species adds another layer of complexity to field identification, especially for OTAP volunteers with less experience with these challenging groups. For these reasons, distribution maps for species in these groups should at best be considered representations of the broader distribution and relative abundance of these genera as a whole. We still have much to learn about these fascinating genera, and further taxonomic and ecological studies focussing on them should be an ongoing endeavour.

Similarly, *Prunus americana/nigra* (American plum/Canada plum) and *Sorbus americana/aucuparia/decora* (American mountain-ash/European mountain-ash/showy mountain-ash) maps may not accurately reflect true distribution as identification can prove to be seasonally difficult for less experienced volunteers.

Data availability

The data used in this publication are available for educational and research purposes. Please contact the University of Guelph Arboretum (arbor@uoguelph.ca) to make a data request or for more information about the Ontario Tree Atlas Project.

Project Contributors

The Ontario Tree Atlas Project was a collaborative effort that would not have been possible without the support of several project partners and funding agencies, and the assistance of more than 1,300 volunteers and Regional Coordinators who collected data for the project. A complete list of volunteers and Regional Coordinators can be found on the final pages of this report.

The following organizations were early supporters of the Ontario Tree Atlas Project and provided financial support:

- Genetic Heritage Program (Ontario Forest Research Institute)
- Ontario Forest Research Institute (Ontario Ministry of Natural Resources and Forestry)
- Environmental Youth Corps Program (Ontario Ministry of Natural Resources and Forestry)
- Forest Gene Conservation Association of Ontario
- The University of Guelph Arboretum

The following individuals were members of the Ontario Tree Atlas Project Advisory Committee from 1995 to 1997 and provided input and guidance on various aspects of the project (positions at time of committee membership):

- Brian Allen - Department of Mathematics and Statistics, University of Guelph
- Jim Anderson - Past-president, Ontario Horticultural Association
- Madeline Austen - Consultant
- Mike Cadman - Forest Bird Monitoring Program, Canadian Wildlife Service
- Brad Graham - Ontario Ministry of Natural Resources and Forestry
- Rob Guthrie - Coordinator, Ontario Tree Atlas Project
- Henry Kock - Interpretive Horticulturalist, The University of Guelph Arboretum
- Michael Moss - Faculty of Environmental Sciences, University of Guelph
- Mike Oldham - Botanist, Natural Heritage Information Centre
- Alan Watson - Director, The University of Guelph Arboretum

The following individuals were involved in various aspects of the Ontario Tree Atlas Project:

Prof. Alan Watson initiated, organized and authored the first draft of the Ontario Tree Atlas, and oversaw the verification of the herbarium samples of “difficult-to-identify” species.

Rob Guthrie was the Ontario Tree Atlas Project Coordinator from 1994 to 2007. His outreach, data management, and collection efforts were essential to the early success of the Project.

Robson Rogan and Michael Ormston-Holloway provided early support to the Ontario Tree Atlas Project.

Ivan Lee assisted with data management and spatial analyses in 2008.

Chris Earley is the Interpretive Biologist & Education Coordinator at the University of Guelph Arboretum and assisted with data collection and supported the project.

Dr. Shelley Hunt is a former Director of the University of Guelph Arboretum (2013–2019) and supported the production of the final report.

Dr. Aron Fazekas is the current Research Coordinator at the University of Guelph Arboretum and supported the production of the final report.

Kellen Wood is the GIS Technician and Equipment Operator at the University of Guelph Arboretum and supported the production of the final report.

Jen Allen, Shannon Blenkarn, Todd Hagedorn, Erika Hentsch, and Spencer Paul assisted with the final phase of the Tree Atlas Project through their course work in ENVS 4011/12 (2015). Their efforts converting the original Tree Atlas data to modern computing standards and documenting the project's history were essential for the completion of the project.

Sean Fox is the Manager of Horticulture at the University of Guelph Arboretum. Sean assisted with data collection for the Tree Atlas Project, contributed to the content and review of the final publication, and provided all species photos.

Dr. Emma Davis is a former Horticultural Intern and Postdoctoral Fellow at the University of Guelph Arboretum. Emma conducted the final spatial analyses for the project and authored the publication with input from Sean Fox, Rob Guthrie, and Alan Watson.

OTAP Species List

The following tree species were included in surveys for the Ontario Tree Atlas Project. The table is presented alphabetically by Latin name; coniferous trees are presented first as a group.

English common name	French common name	Latin name	Status
Balsam fir	Sapin baumier	*Abies balsamea*	Native
Eastern red-cedar	Genévrier de Virginie	*Juniperus virginiana*	Native
European larch	Mélèze d'Europe	*Larix decidua*	Introduced
Tamarack	Mélèze laricin	*Larix laricina*	Native
Norway spruce	Épinette de Norvège	*Picea abies*	Introduced
White spruce	Épinette blanche	*Picea glauca*	Native
Black spruce	Épinette noire	*Picea mariana*	Native
Red spruce	Épinette rouge	*Picea rubens*	Native
Jack pine	Pin gris	*Pinus banksiana*	Native
Red pine	Pin rouge	*Pinus resinosa*	Native
Pitch pine	Pin rigide	*Pinus rigida*	Native
Eastern white pine	Pin blanc	*Pinus strobus*	Native
Scots pine	Pin sylvestre	*Pinus sylvestris*	Introduced
Eastern white-cedar	Thuya occidental	*Thuja occidentalis*	Native
Eastern hemlock	Pruche du Canada	*Tsuga canadensis*	Native
Manitoba maple	Érable à Giguère	*Acer negundo*	Native
Striped maple	Érable de Pennsylvanie	*Acer pensylvanicum*	Native
Norway maple	Érable de Norvège	*Acer platanoides*	Introduced
Red maple	Érable rouge	*Acer rubrum*	Native
Freeman's maple	Érable de Freeman	*Acer* × *freemanii*	Native
Silver maple	Érable argenté	*Acer saccharinum*	Native
Black maple	Érable noir	*Acer nigrum*	Native
Sugar maple	Érable à sucre	*Acer saccharum*	Native
Mountain maple	Érable à épis	*Acer spicatum*	Native
Horse-chestnut	Marronnier d'Inde	*Aesculus hippocastanum*	Introduced
Tree-of-heaven	Ailante glanduleux	*Ailanthus altissima*	Introduced
European black alder	Aulne glutineux	*Alnus glutinosa*	Introduced
Speckled alder	Aulne rugueux	*Alnus incana* subsp. *Rugosa*	Native
Downy and smooth serviceberries	Amélanchiers	*Amelanchier* spp.	Native

English common name	French common name	Latin name	Status
Pawpaw	Asiminier trilobé	*Asimina triloba*	Native
Yellow birch	Bouleau jaune	*Betula alleghaniensis*	Native
Paper birch	Bouleau à papier	*Betula papyrifera*	Native
European white birch	Bouleau verruqueux	*Betula pendula*	Introduced
Grey birch	Bouleau gris	*Betula populifolia*	Native
Blue-beech	Charme de Caroline	*Carpinus caroliniana*	Native
Bitternut hickory	Caryer cordiforme	*Carya cordiformis*	Native
Pignut hickory	Caryer glabre	*Carya glabra*	Native
Shellbark hickory	Caryer lacinié	*Carya laciniosa*	Native
Shagbark hickory	Caryer ovale	*Carya ovata*	Native
American chestnut	Châtaignier d'Amérique	*Castanea dentata*	Native
Common hackberry	Micocoulier occidental	*Celtis occidentalis*	Native
Dwarf hackberry	Micocoulier rabougri	*Celtis tenuifolia*	Native
Alternate-leaved dogwood	Cornouiller à feuilles alternes	*Cornus alternifolia*	Native
Eastern flowering dogwood	Cornouiller fleuri	*Cornus florida*	Native
Cockspur hawthorn	Aubépine ergot-de-coq	*Crataegus crus-galli*	Native
Hawthorn	Aubépine	*Crataegus* spp.	Native
American beech	Hêtre à grandes feuilles	*Fagus grandifolia*	Native
Glossy buckthorn	Nerprun bourdaine	*Frangula alnus*	Introduced
White ash	Frêne blanc	*Fraxinus americana*	Native
Black ash	Frêne noir	*Fraxinus nigra*	Native
Red ash	Frêne rouge	*Fraxinus pennsylvanica*	Native
Pumpkin ash	Frêne pubescent	*Fraxinus profunda*	Native
Blue ash	Frêne bleu	*Fraxinus quadrangulata*	Native
Honey-locust	Févier épineux	*Gleditsia triacanthos*	Native
Kentucky coffee-tree	Chicot févier	*Gymnocladus dioicus*	Native
Butternut	Noyer cendré	*Juglans cinerea*	Native
Black walnut	Noyer noir	*Juglans nigra*	Native
Tulip tree	Tulipier de Virginie	*Liriodendron tulipifera*	Native
Osage-orange	Boid d'arc	*Maclura pomifera*	Introduced
Cucumber tree	Magnolia acuminé	*Magnolia acuminata*	Native
White mulberry	Mûrier blanc	*Morus alba*	Introduced

English common name	French common name	Latin name	Status
Red mulberry and white × red mulberry	Mûrier rouge et Mûrier blanc x rouge	*Morus rubra* and *Morus alba* × *Morus rubra*	Native / Introduced
Black gum	Nyssa sylvestre	*Nyssa sylvatica*	Native
Eastern hop-hornbeam	Ostryer de Virginie	*Ostrya virginiana*	Native
Sycamore	Platane occidental	*Platanus occidentalis*	Native
White poplar	Peuplier blanc	*Populus alba*	Introduced
Balsam poplar	Peuplier baumier	*Populus balsamifera*	Native
Eastern cottonwood	Peuplier deltoïde	*Populus deltoides*	Native
Canada poplar	Peuplier de Caroline	*Populus* × *canadensis*	Introduced
Large-toothed aspen	Peuplier à grandes dents	*Populus grandidentata*	Native
Trembling aspen	Peuplier faux-tremble	*Populus tremuloides*	Native
American plum	Prunier d'Amérique	*Prunus americana*	Native
Sweet cherry	Cerisier des oiseaux	*Prunus avium*	Introduced
Canada plum	Prunier noir	*Prunus nigra*	Native
Pin cherry	Cerisier de Pennsylvanie	*Prunus pensylvanica*	Native
Black cherry	Cerisier tardif	*Prunus serotina*	Native
Chokecherry	Cerisier de Virginie	*Prunus virginiana*	Native
Common hop-tree	Ptéléa trifolié	*Ptelea trifoliata*	Native
White oak	Chêne blanc	*Quercus alba*	Native
Swamp white oak	Chêne bicolore	*Quercus bicolor*	Native
Hill’s oak	Chêne ellipsoïdal	*Quercus ellipsoidalis*	Native
Bur oak	Chêne à gros fruits	*Quercus macrocarpa*	Native
Chinquapin oak	Chêne jaune	*Quercus muehlenbergii*	Native
Pin oak	Chêne des marais	*Quercus palustris*	Native
Northern red oak	Chêne rouge	*Quercus rubra*	Native
Shumard oak	Chêne de Shumard	*Quercus shumardii*	Native
Black oak	Chêne des teinturiers	*Quercus velutina*	Native
European buckthorn	Nerprun cathartique	*Rhamnus cathartica*	Introduced
Smooth sumac	Sumac glabre	*Rhus glabra*	Native
Staghorn sumac	Sumac vinaigrier	*Rhus typhina*	Native
Black-locust	Robinier faux-acacia	*Robinia pseudoacacia*	Introduced
Peach-leaved willow	Saule à feuilles de pêcher	*Salix amygdaloides*	Native
Black willow	Saule noir	*Salix nigra*	Native
Eurasian hybrid willow complex	Saule hybride	*Salix* spp.	Introduced

English common name	French common name	Latin name	Status
Sassafras	Sassafras officinal	*Sassafras albidum*	Native
American mountain-ash	Sorbier d'Amérique	*Sorbus americana*	Native
European mountain-ash	Sorbier des oiseleurs	*Sorbus aucuparia*	Introduced
Showy mountain-ash	Sorbier plaisant	*Sorbus decora*	Native
Basswood	Tilleul d'Amérique	*Tilia americana*	Native
Poison sumac	Sumac à vernis	*Toxicodendron vernix*	Native
White elm	Orme d'Amérique	*Ulmus americana*	Native
Siberian elm	Orme de Sibérie	*Ulmus pumila*	Introduced
Slippery elm	Orme rouge	*Ulmus rubra*	Native
Rock elm	Orme liège	*Ulmus thomasii*	Native

Balsam fir | Sapin baumier

Abies balsamea

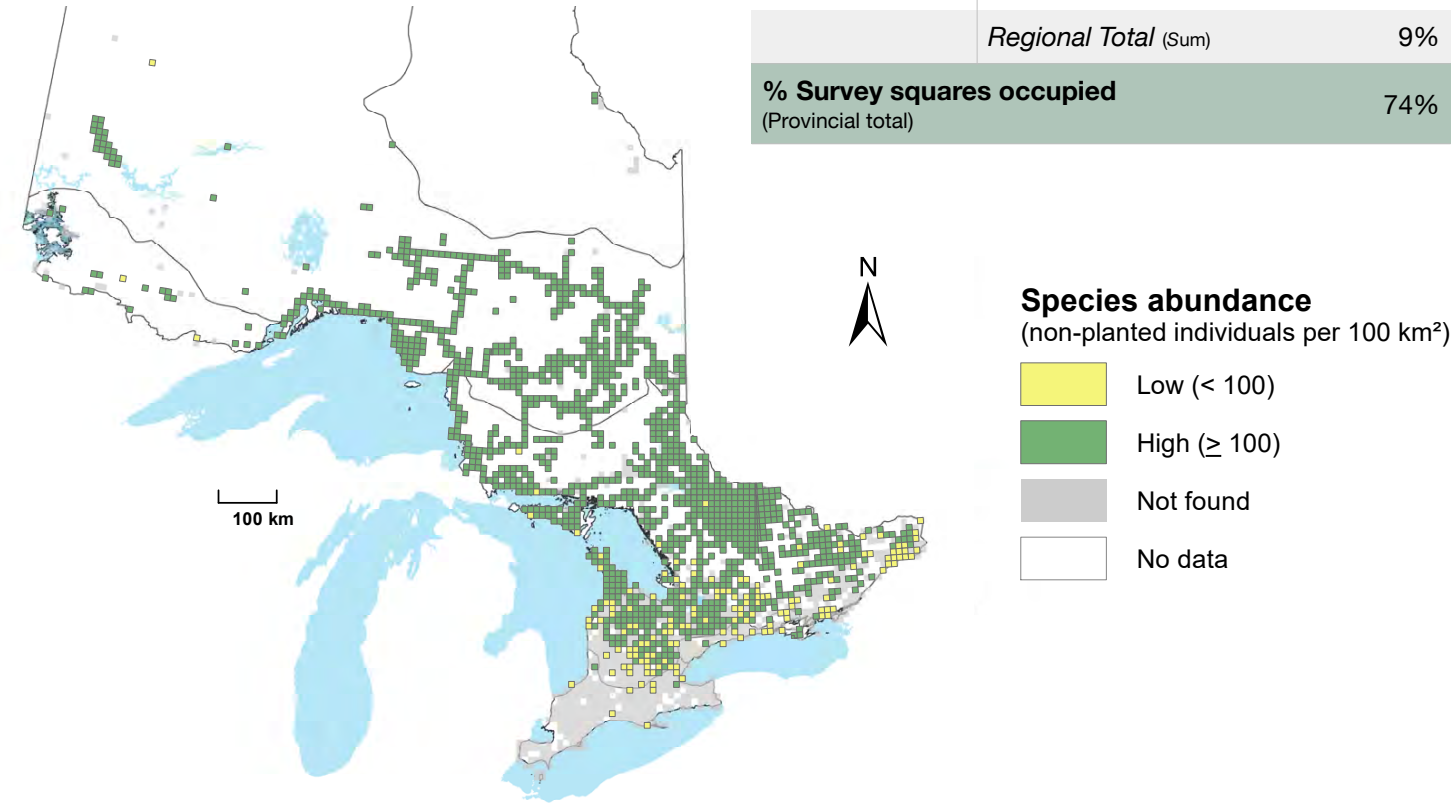
Native to Ontario

Reported distribution: The range of balsam fir was largely contained within the Great Lakes - St. Lawrence and boreal forest regions. Balsam firs were identified in only 9% of squares in the deciduous forest region, reflecting the species' northern distribution. The northern extent of its range is not fully captured by the Tree Atlas surveys, as balsam firs are known to grow at the highest latitudes of the province.

Reported abundance: A well-defined transition in the abundance of balsam fir occurred along a ~100 km wide band extending from the St. Lawrence River valley, west to Lake Huron. The abundance of the species increased with latitude within this region.

Table 1 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

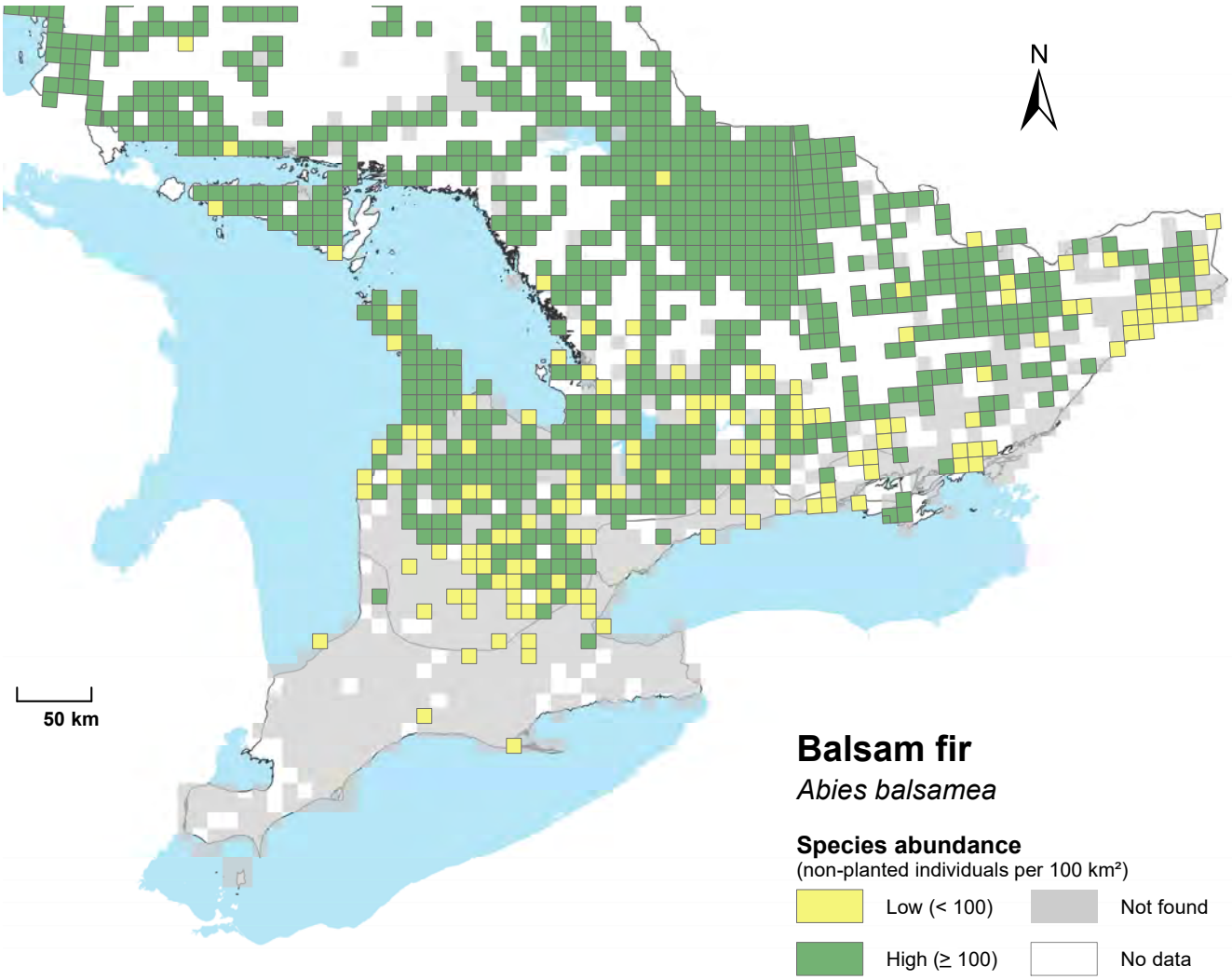
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	97%
	Regional Total (Sum)	97%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	11%
	High (≥ 100 per 100 km²)	70%
	Regional Total (Sum)	81%
Deciduous	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	9%
% Survey squares occupied (Provincial total)		74%



Balsam fir | Sapin baumier

Abies balsamea

The reported distribution and abundance of balsam fir in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Eastern red-cedar | Genévrier de Virginie

Juniperus virginiana

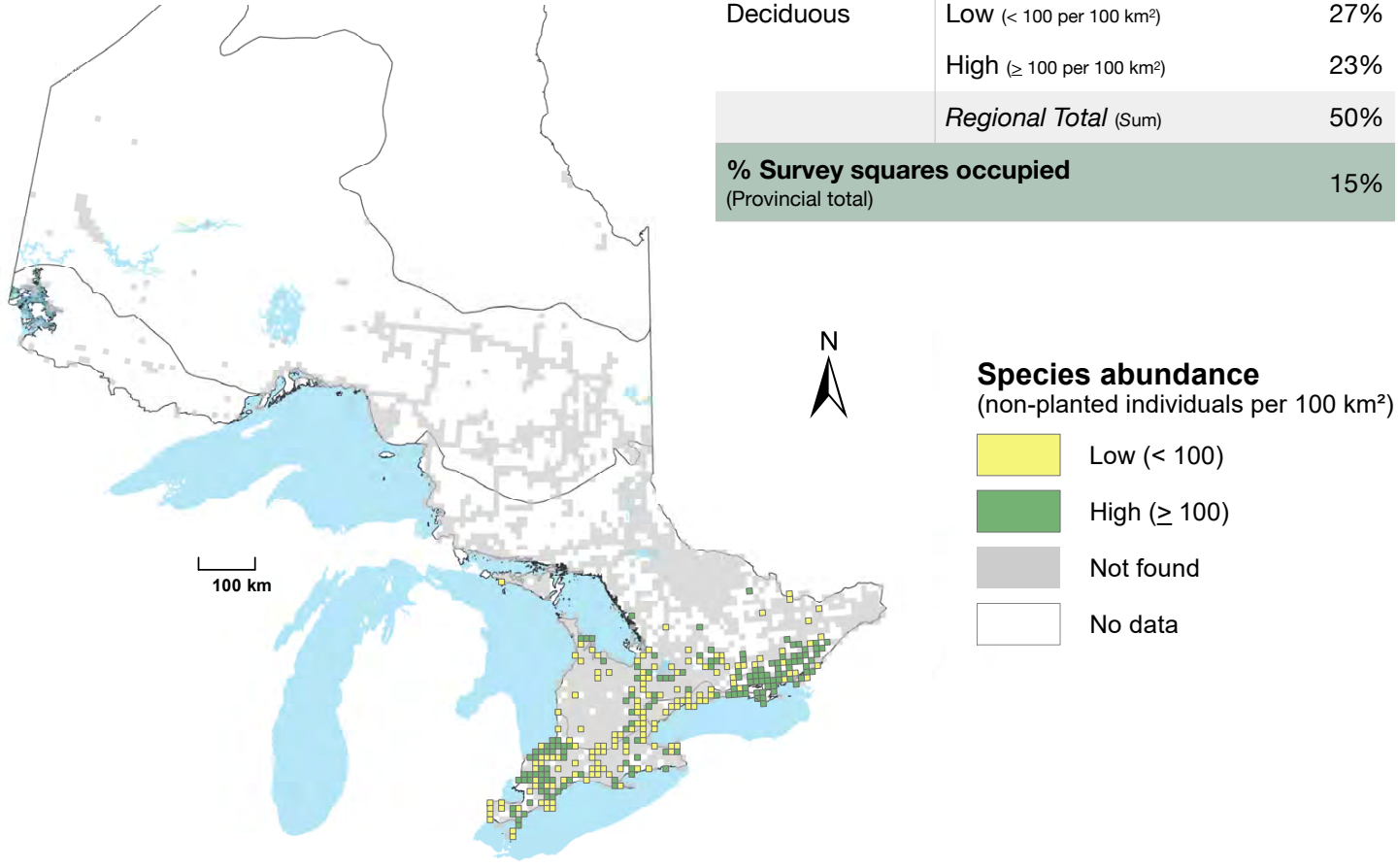
Native to Ontario

Reported distribution: The distribution of eastern red-cedar was mainly contained within southern Ontario where it occupied 50% of surveyed squares within the deciduous forest region and 12% of squares within the Great Lakes - St. Lawrence. Its range in Ontario extends from the southwestern tip of the province eastwards towards Lanark County.

Reported abundance: Eastern red-cedar was observed to be most abundant in the southwest and northeastern portions of its range, where many survey squares were identified as having ≥ 100 individuals per survey square.

Table 2 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

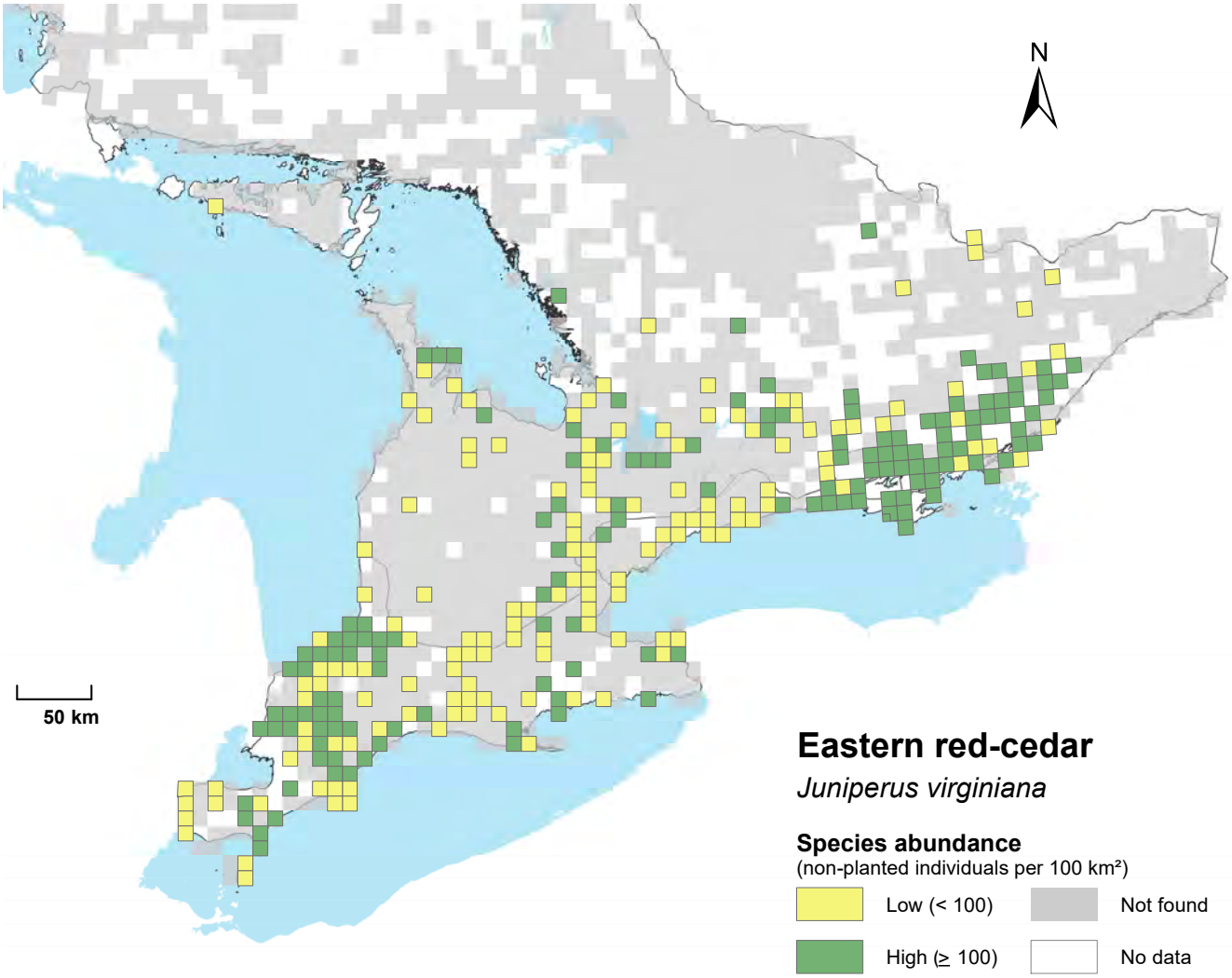
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	12%
Deciduous	Low (< 100 per 100 km²)	27%
	High (≥ 100 per 100 km²)	23%
	Regional Total (Sum)	50%
% Survey squares occupied (Provincial total)		15%



Eastern red-cedar | Genévrier de Virginie

Juniperus virginiana

The reported distribution and abundance of eastern red-cedar in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

European larch | Mélèze d'Europe

Larix decidua

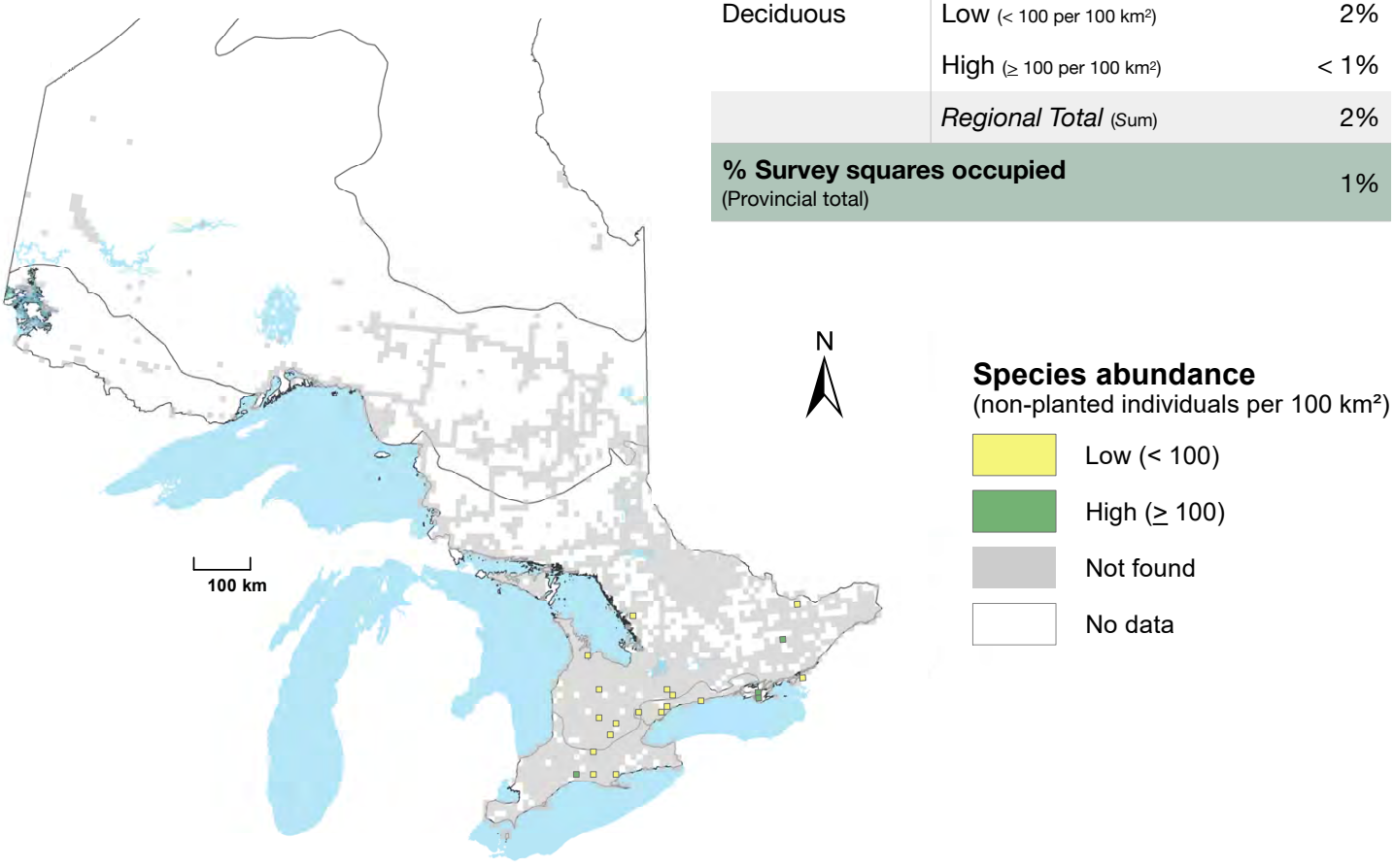
Introduced to Ontario

Reported distribution: European larch is an introduced species in Ontario. Non-planted individuals had a very limited distribution; the species was found in only 21 survey squares, all of which were in the deciduous and Great Lakes - St. Lawrence forest regions.

Reported abundance: Within its limited distribution, European larches were primarily found growing at low abundance with only 4 of 21 occupied squares having ≥ 100 individuals. The distribution of European larch is mainly confined to planted trees in Ontario, indicating that this introduced species has not readily naturalized.

Table 3 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

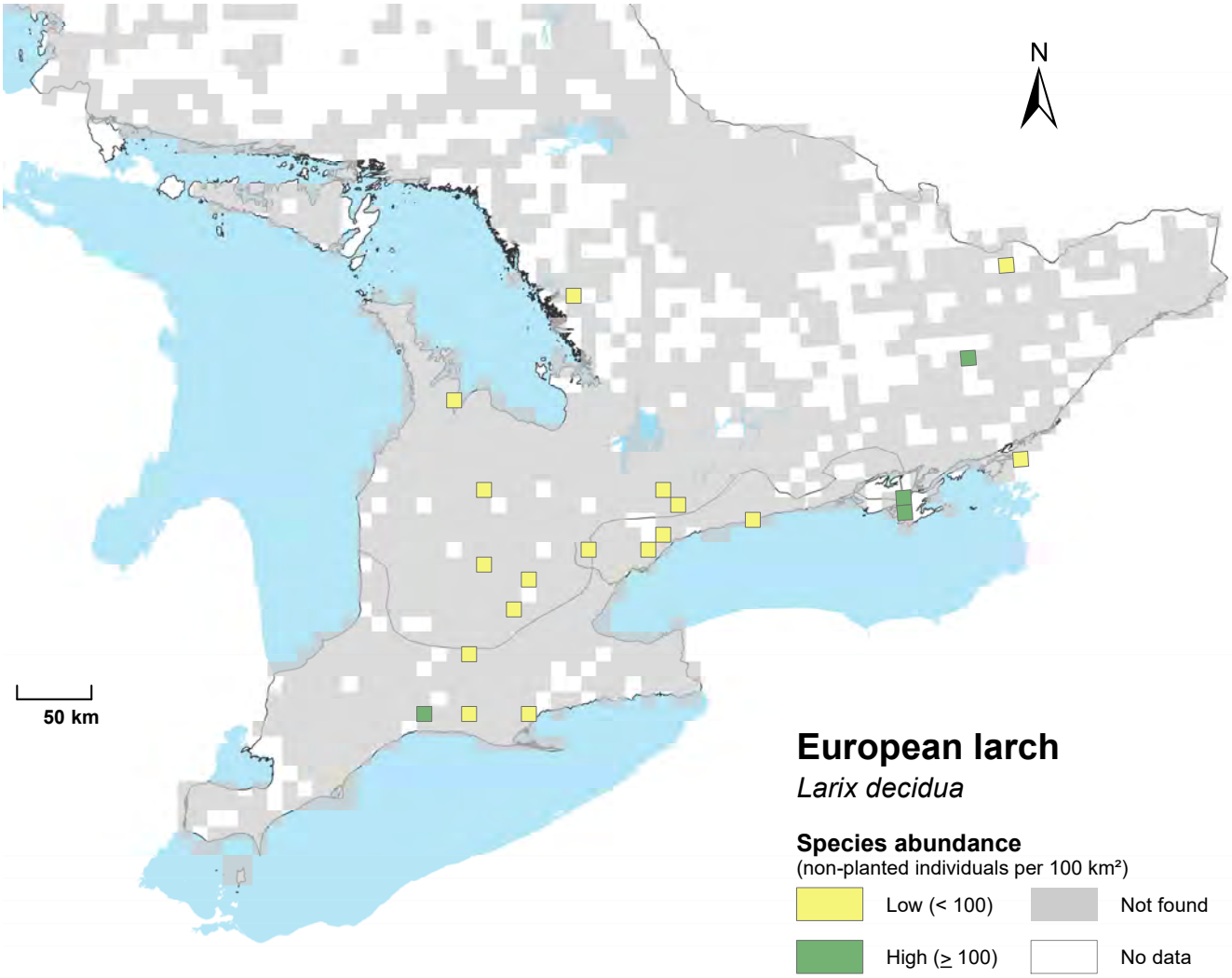
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	2%
% Survey squares occupied (Provincial total)		1%



European larch | Mélèze d'Europe

Larix decidua

The reported distribution and abundance of European larch in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Tamarack | Mélèze laricin

Larix laricina

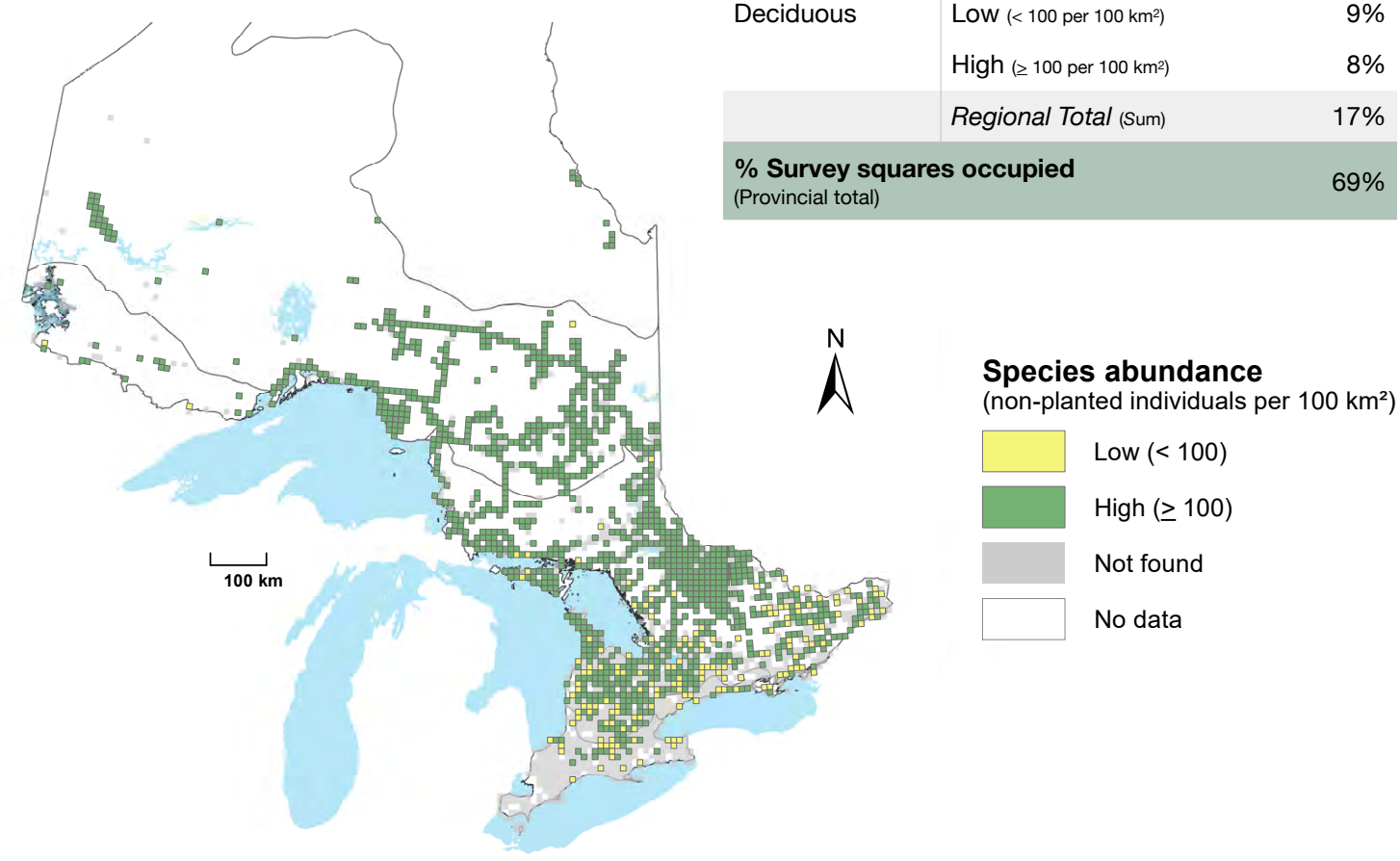
Native to Ontario

Reported distribution: Tamarack was widely distributed throughout Ontario. The species was most common in the boreal and Great Lakes - St. Lawrence forest regions where it occupied 90% and 73% of surveyed squares. Tamaracks were identified in only 17% of squares in the deciduous forest region. The northern extent of the species range was likely not fully captured by the Tree Atlas surveys.

Reported abundance: The provincial population of tamarack increased with latitude and the species was highly abundant in the boreal forest region. It was fairly uncommon in the extreme southwest of the province where very few individuals were identified.

Table 4 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

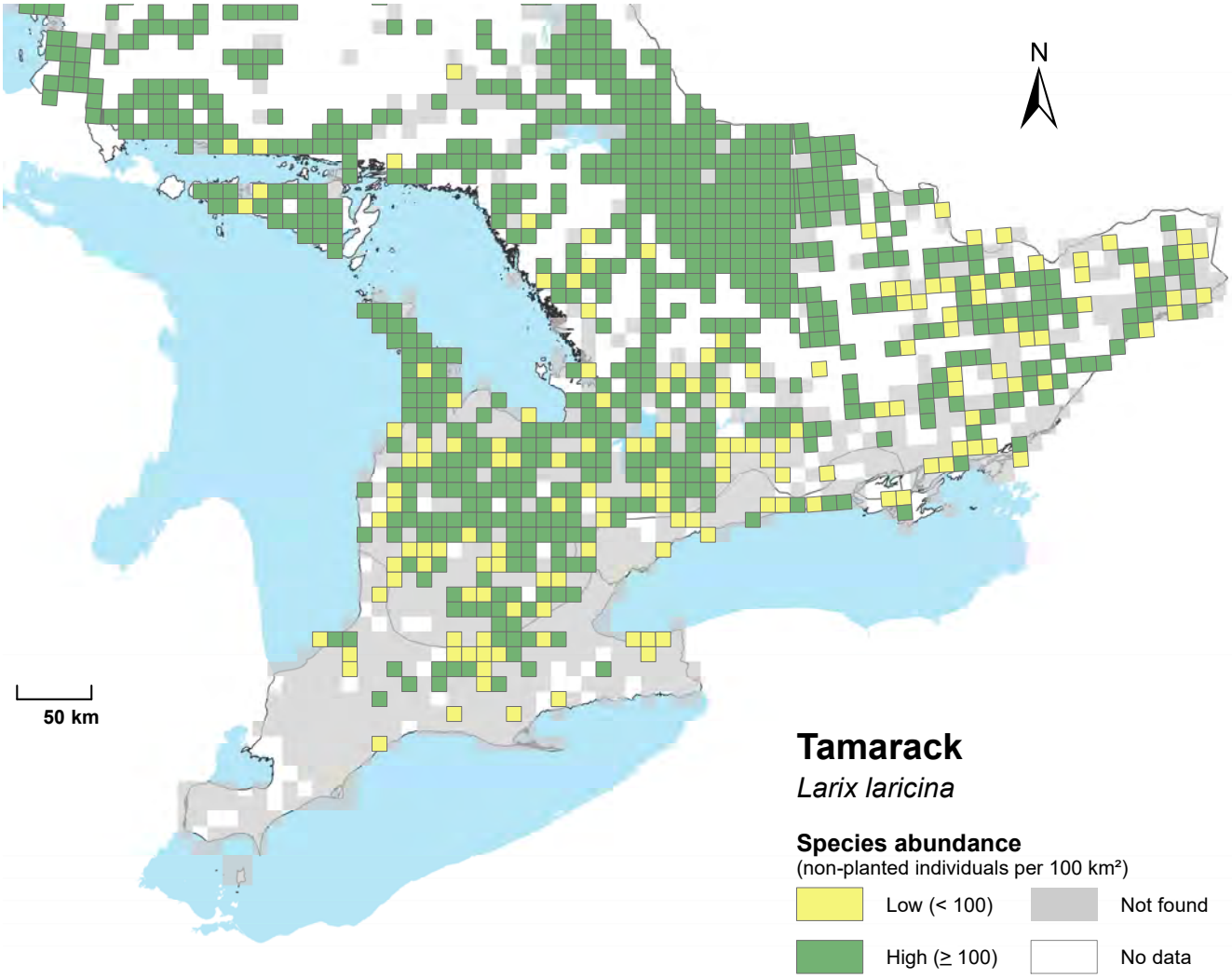
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	90%
	Regional Total (Sum)	90%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	11%
	High (≥ 100 per 100 km²)	62%
	Regional Total (Sum)	73%
Deciduous	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	8%
	Regional Total (Sum)	17%
% Survey squares occupied (Provincial total)		69%



Tamarack | Mélèze laricin

Larix laricina

The reported distribution and abundance of Tamarack in squares surveyed in southern Ontario (below 47°N)



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Norway spruce | Épinette de Norvège

Picea abies

Introduced to Ontario

Reported distribution: Norway spruce is an introduced species in Ontario and its non-planted distribution was confined to southern Ontario. The species was identified in discontinuous survey squares in the Great Lakes - St. Lawrence and deciduous forest regions, where it occupied 3% and 6% of survey squares.

Reported abundance: Non-planted Norway spruces occurred in low numbers in Ontario and were typically found at low abundance (< 100 individuals per survey square). The limited distribution and low abundance of non-planted individuals indicates that Norway Spruce has not extensively naturalized in Ontario.

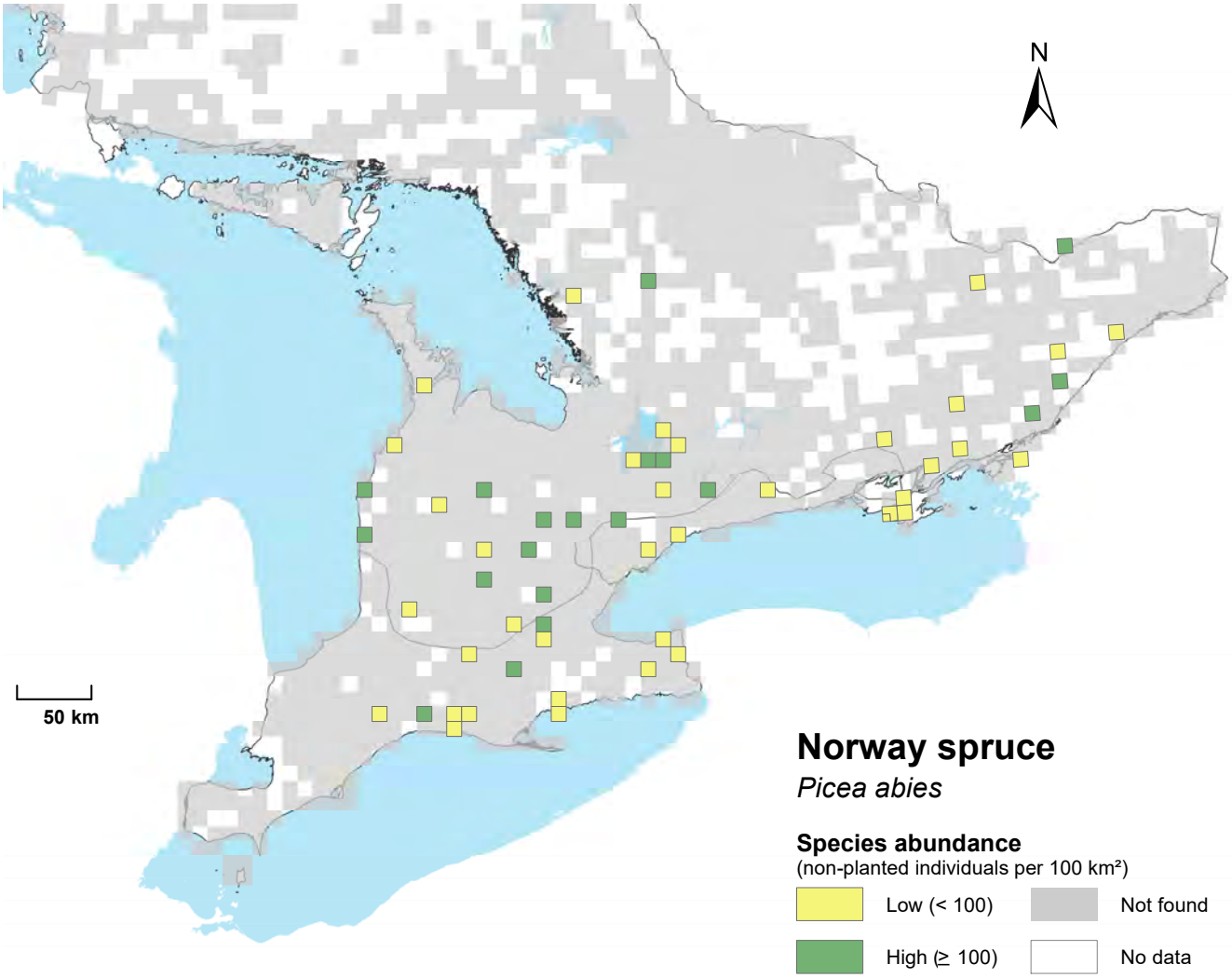
Table 5 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	5%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	6%
% Survey squares occupied (Provincial total)		3%

Norway spruce | Épinette de Norvège

Picea abies

The reported distribution and abundance of Norway spruce in squares surveyed in southern Ontario (below 47°N)



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White spruce | Épinette blanche

Picea glauca

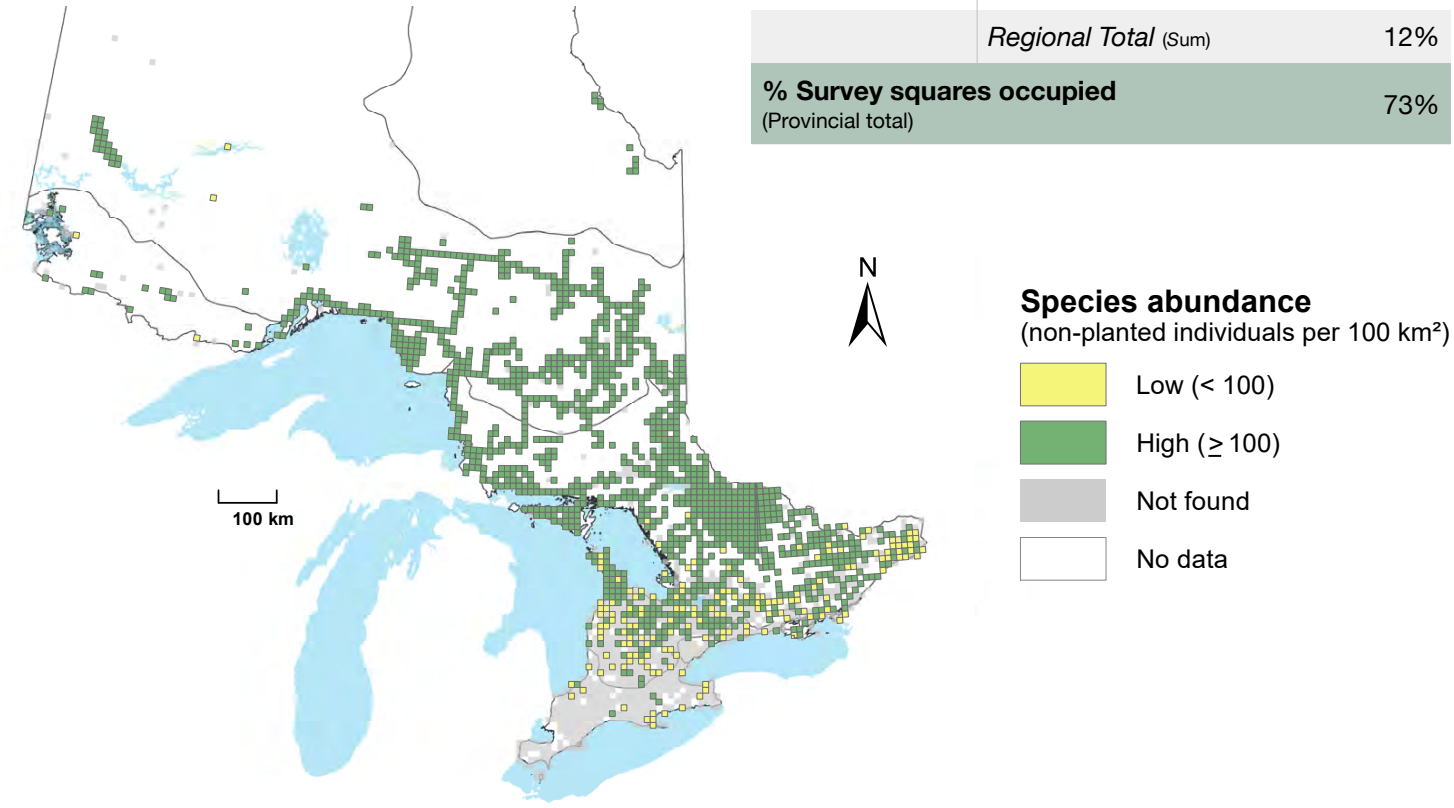
Native to Ontario

Reported distribution: White spruce grew in all forest regions of Ontario; however, its distribution was most continuous in the boreal forest region (96% of squares occupied). The species' occurrence was sporadic in southwestern Ontario where it was identified in relatively isolated groups of survey squares. The northern extent of the species range was likely not fully captured by the Tree Atlas surveys.

Reported abundance: There is a well-defined transition in the abundance of white spruce in south-central Ontario where the species shifts from low to high abundance with increasing latitude. In northern areas of the province, white spruce was found at high abundance (≥ 100 individuals) in nearly all surveyed squares.

Table 6 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

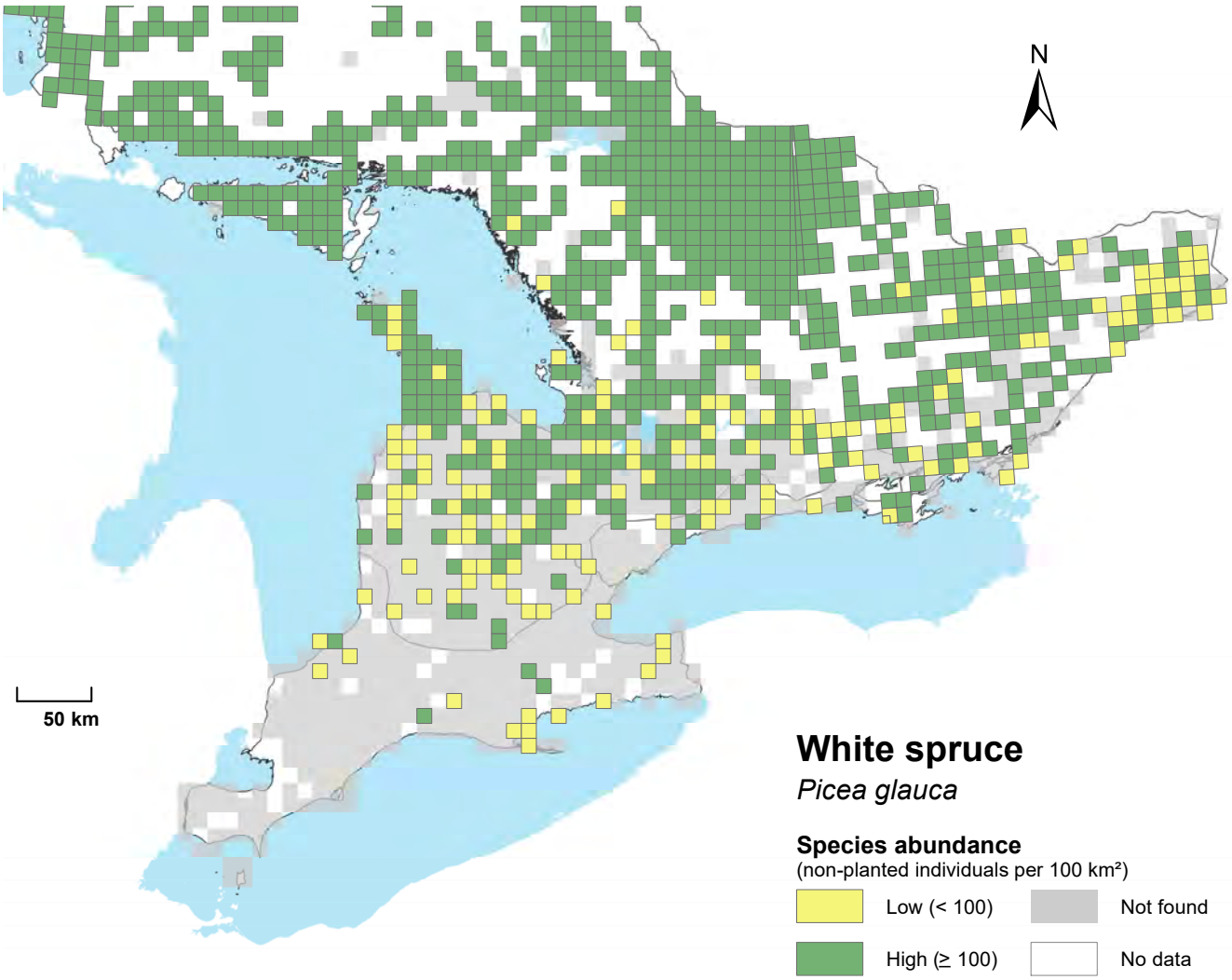
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	95%
	Regional Total (Sum)	96%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	11%
	High (≥ 100 per 100 km²)	68%
	Regional Total (Sum)	79%
Deciduous	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		73%



White spruce | Épinette blanche

Picea glauca

The reported distribution and abundance of white spruce in squares surveyed in southern Ontario (below 47°N)



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Black spruce | Épinette noire

Picea mariana

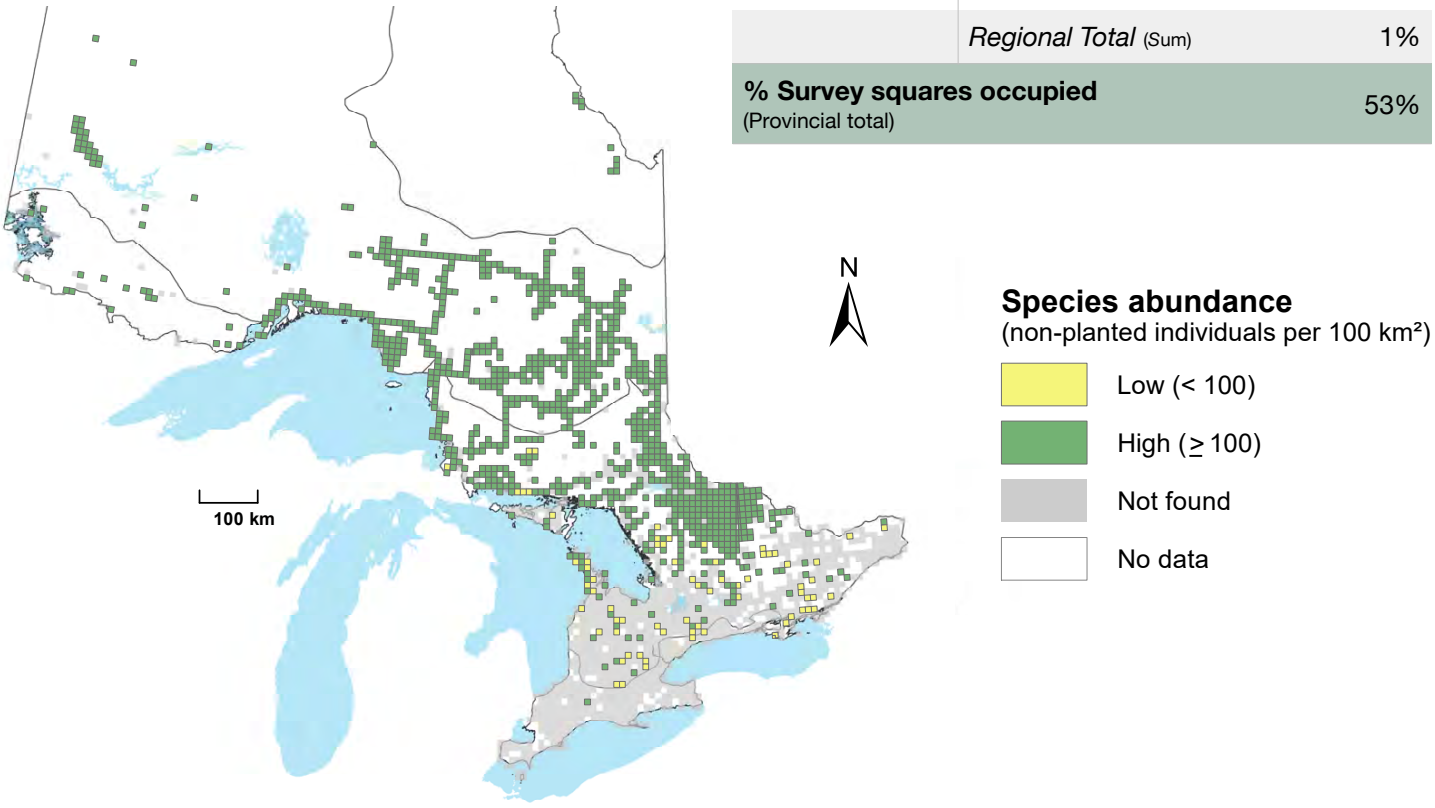
Native to Ontario

Reported distribution: Black spruce was primarily identified in central and northern Ontario. The species was observed in 97% and 47% of survey squares in the boreal and Great Lakes - St. Lawrence forest regions. Black spruces mainly occurred in isolated survey squares in southern Ontario. The northern distribution of the species is not fully captured by the Tree Atlas surveys.

Reported abundance: Black spruces were highly abundant in northern Ontario, with ≥ 100 individuals noted in all squares in which the species was identified in the boreal forest region. At the provincial level, the abundance of black spruce shifted from low to high with increasing latitude.

Table 7 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

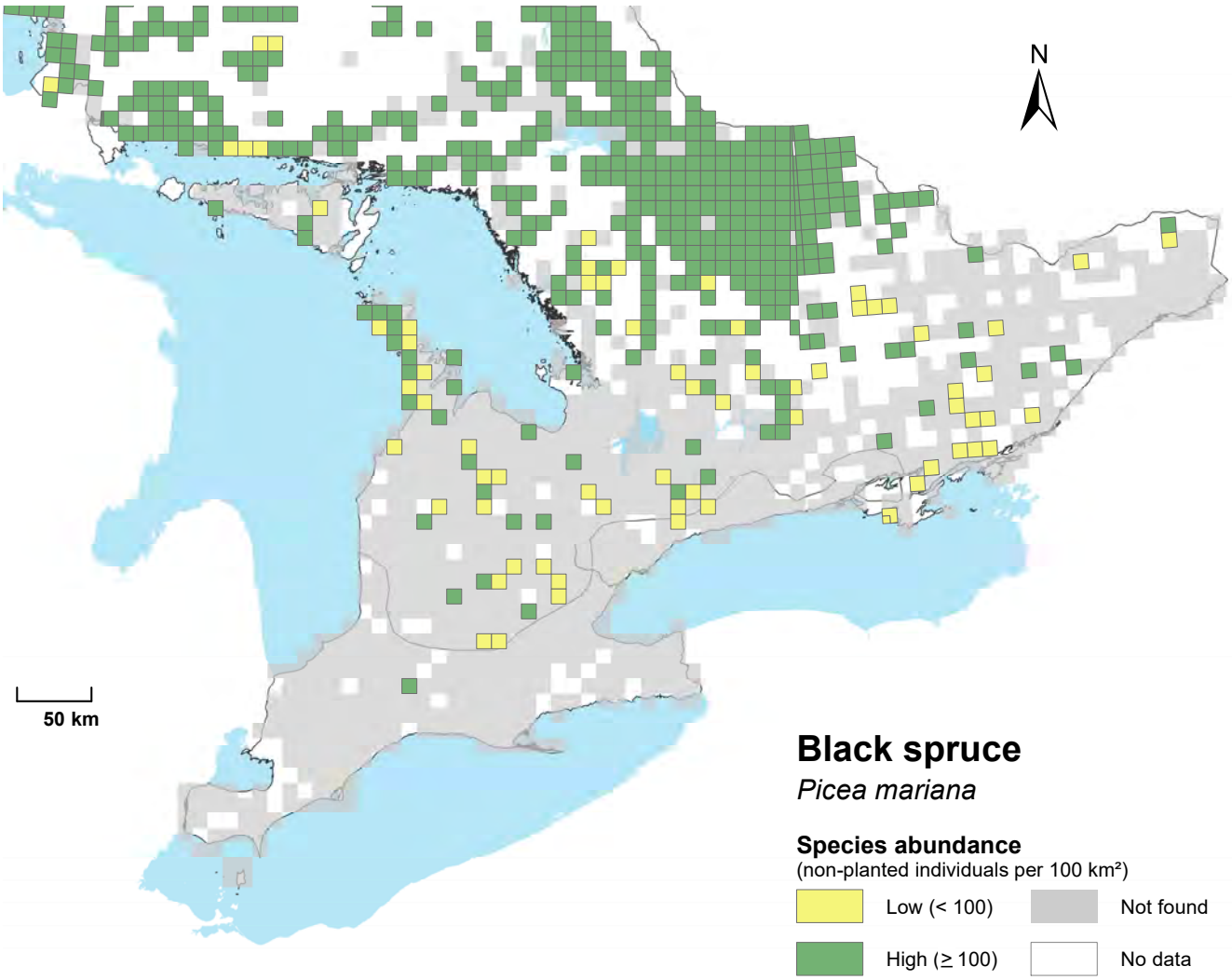
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	97%
	Regional Total (Sum)	97%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	41%
	Regional Total (Sum)	47%
Deciduous	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
% Survey squares occupied (Provincial total)		53%



Black spruce | Épinette noire

Picea mariana

The reported distribution and abundance of black spruce in squares surveyed in southern Ontario (below 47°N)



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Red spruce | Épinette rouge

Picea rubens

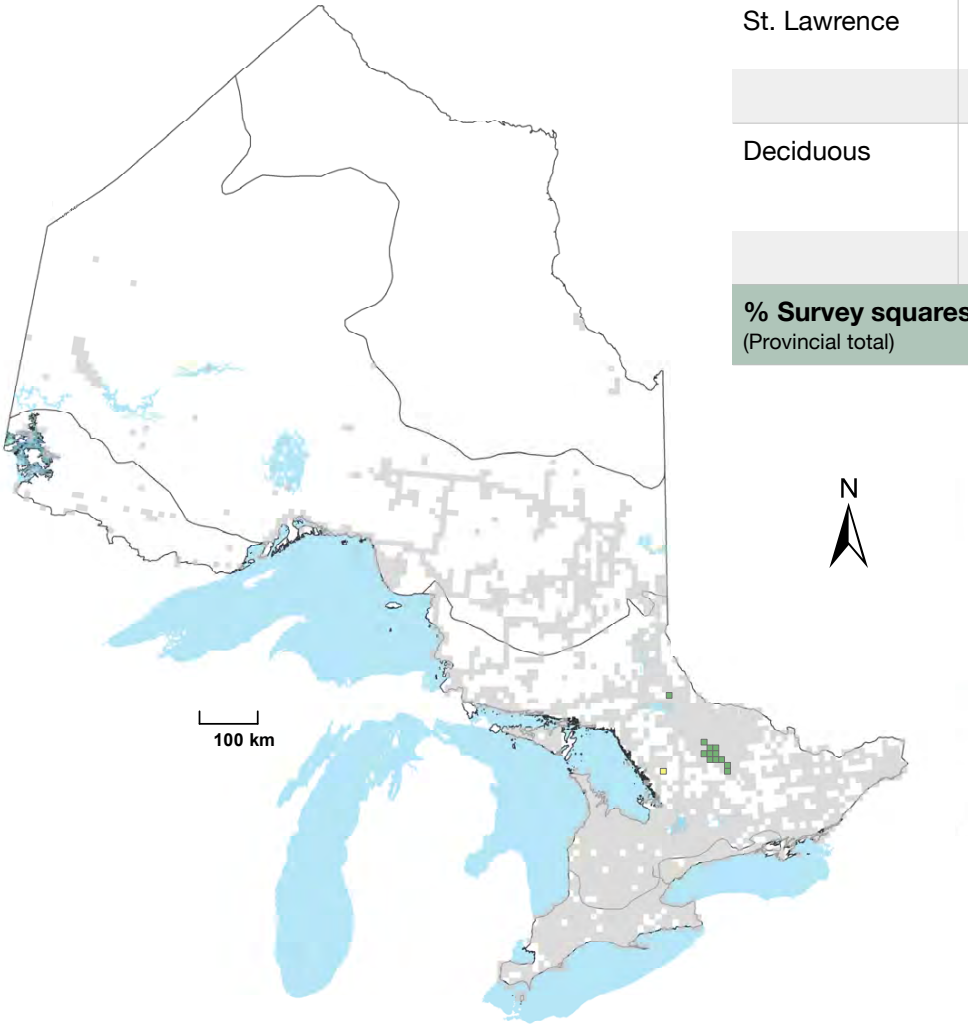
Native to Ontario

Reported distribution: Red spruce had a very limited distribution in Ontario and was identified in only 13 survey squares in the Great Lakes - St. Lawrence forest region. Of these, most were clustered in a group of squares in the southern portion of Algonquin Park.

Reported abundance: Of the limited survey squares in which it occurred, red spruces grew most commonly at high abundance (12 of 13 squares).

Table 8 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

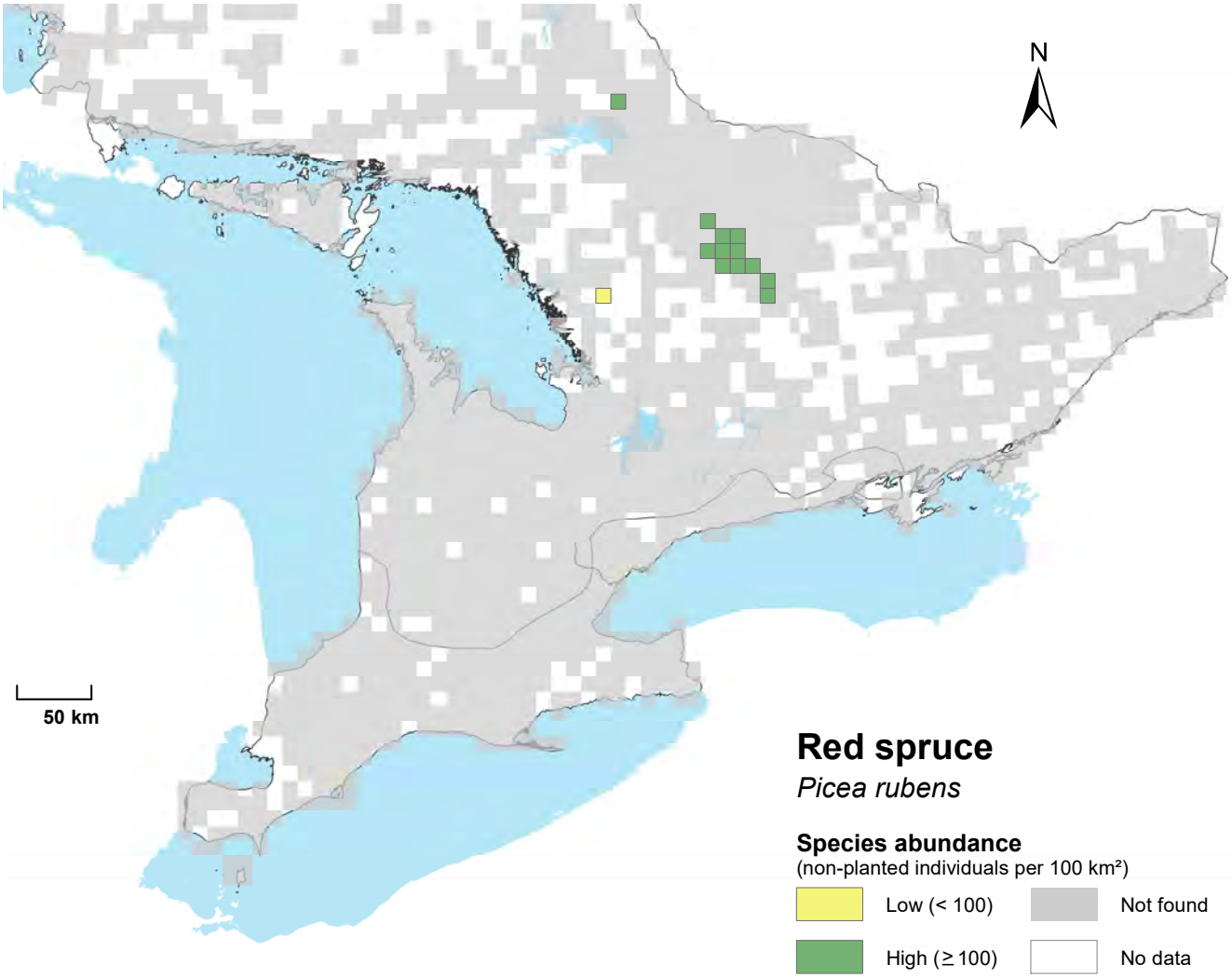
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	<1%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	1%
Deciduous	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
% Survey squares occupied (Provincial total)		< 1%



Red spruce | Épinette rouge

Picea rubens

The reported distribution and abundance of red spruce in squares surveyed in southern Ontario (below 47°N)



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Jack pine | Pin gris

Pinus banksiana

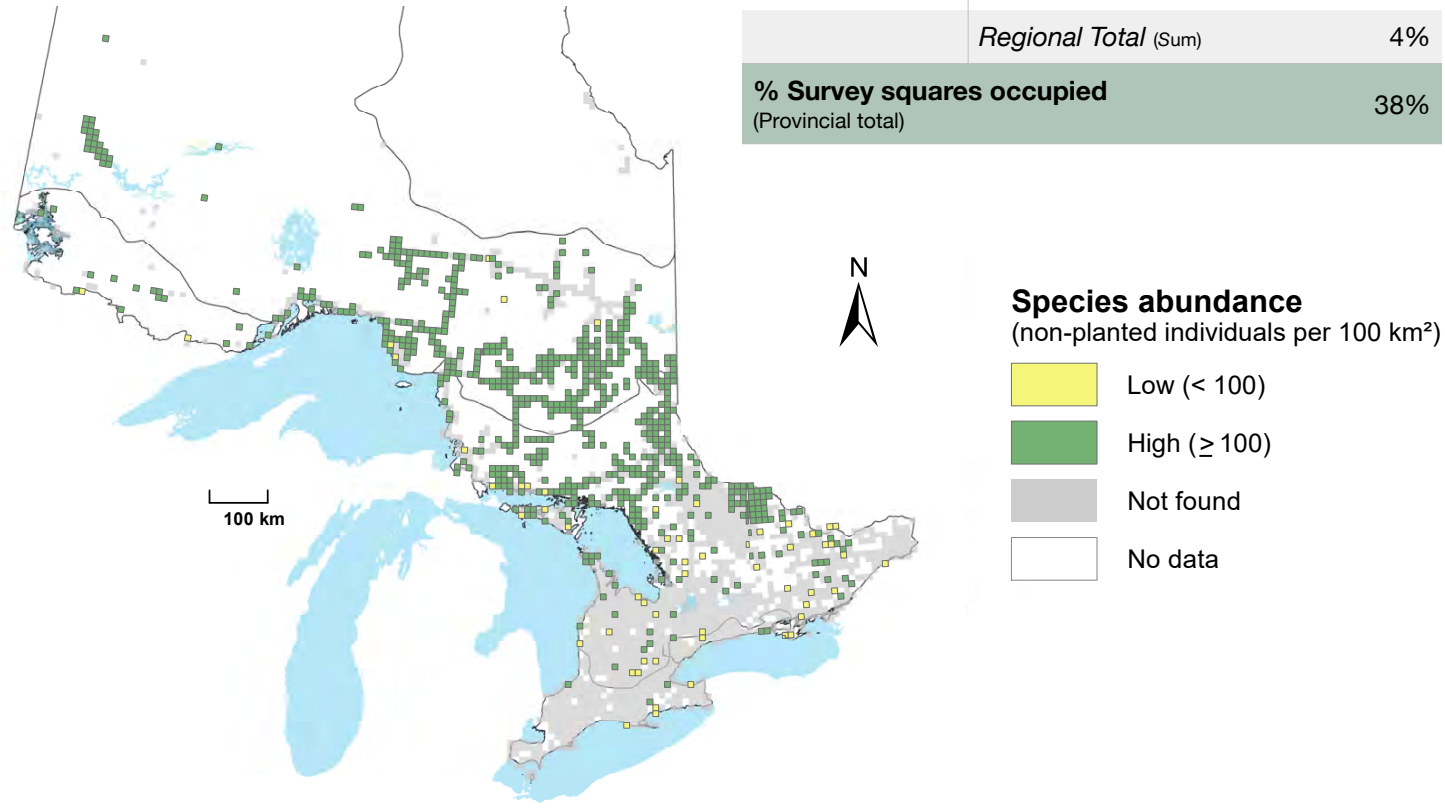
Native to Ontario

Reported distribution: Jack pines were primarily identified in survey squares above 46°N latitude in Ontario. The species' distribution was discontinuous in the southern portion of the province where jack pines tended to be located in isolated groups of survey squares. The species was largely absent from southwestern Ontario.

Reported abundance: Jack pine occurred at high abundance in central and northern areas of the province. The species had a low abundance in the southern portion of its distribution where many survey squares had < 100 individuals.

Table 9 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

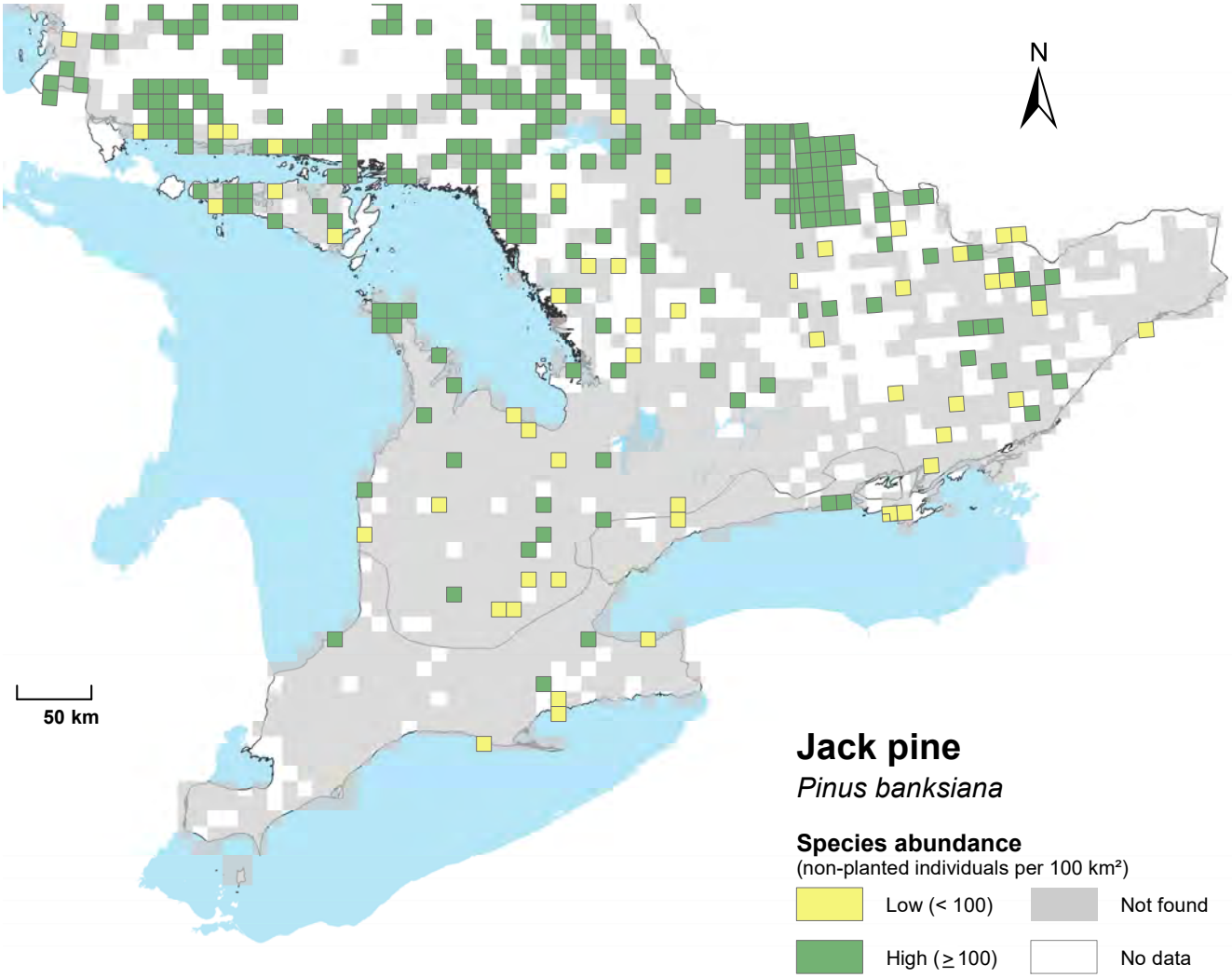
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	75%
	Regional Total (Sum)	76%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	27%
	Regional Total (Sum)	31%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	4%
% Survey squares occupied (Provincial total)		38%



Jack pine | Pin gris

Pinus banksiana

The reported distribution and abundance of jack pine in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Red pine | Pin rouge

Pinus resinosa

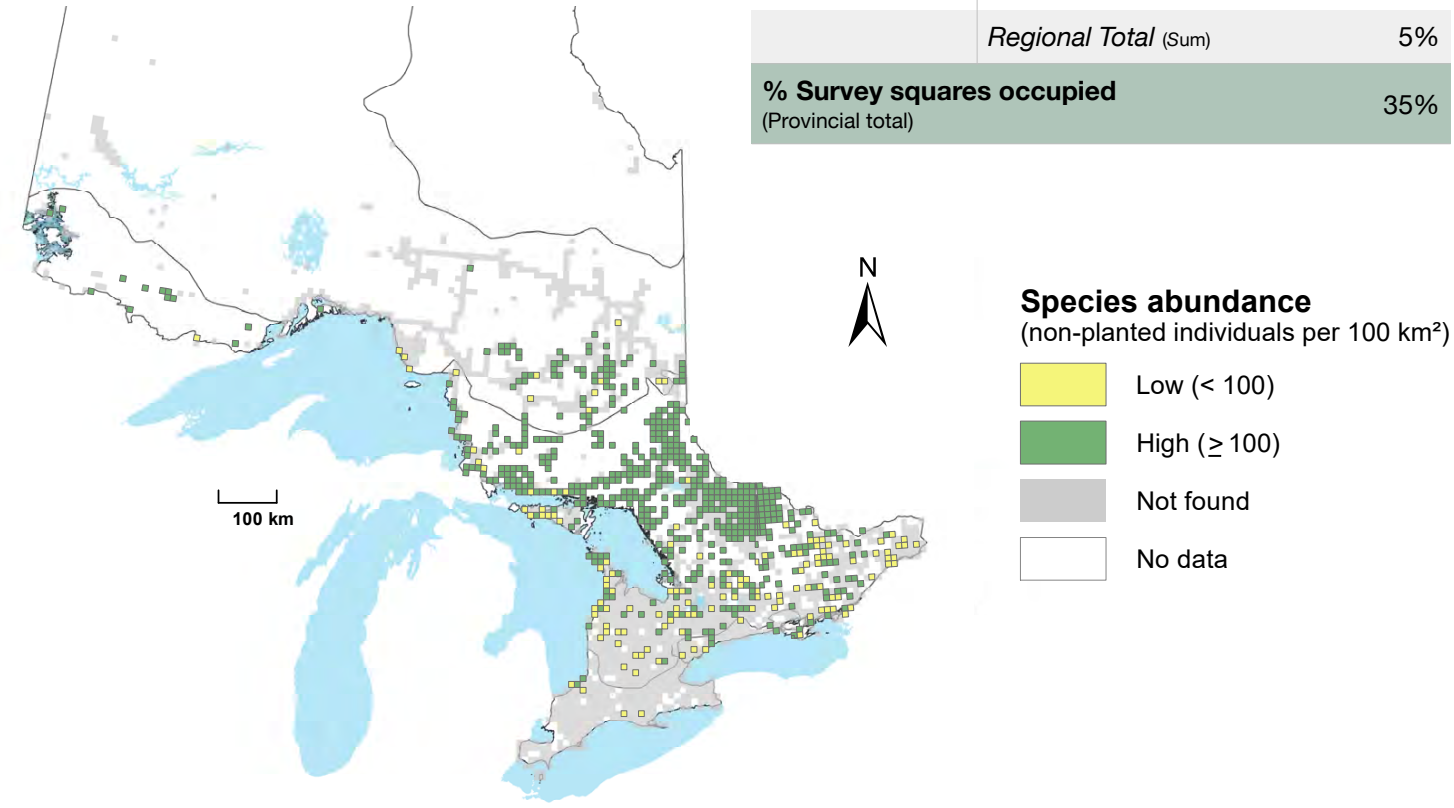
Native to Ontario

Reported distribution: The distribution of red pine in Ontario was largely contained to the Great Lakes - St. Lawrence forest region, where the species occurred in the majority (51%) of squares surveyed. Red pines were also observed in the southern portion of the boreal, and in a limited number of survey squares in the deciduous forest region. The species was absent from the northern- and southernmost survey squares.

Reported abundance: Within its main distribution in the Great Lakes - St. Lawrence forest region, red pine transitioned from low to high abundance with increasing latitude. The species tended to grow at a lower abundance in the southern portion of its range and was infrequently encountered in northern Ontario.

Table 10 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

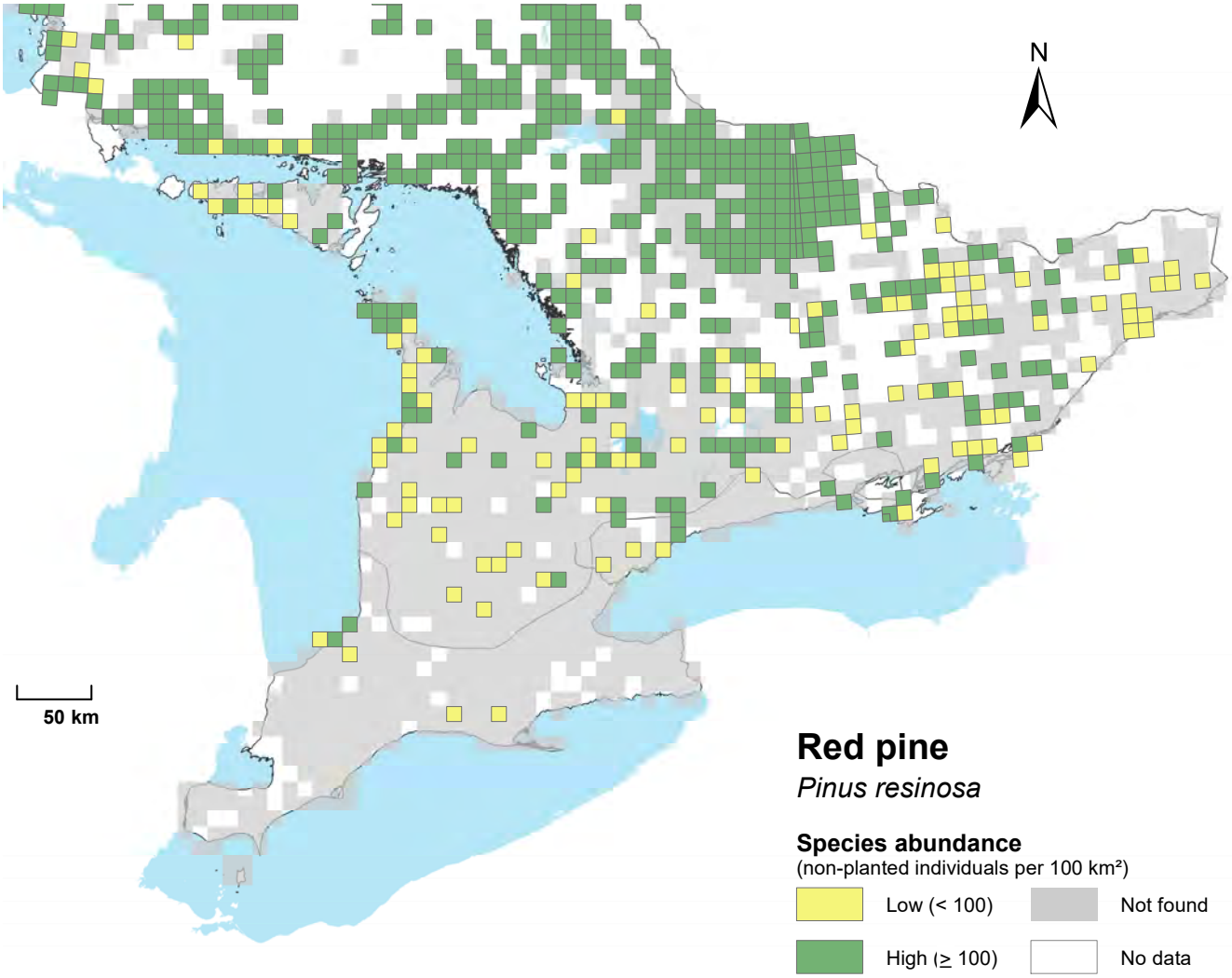
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	13%
	Regional Total (Sum)	16%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	41%
	Regional Total (Sum)	51%
Deciduous	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	5%
% Survey squares occupied (Provincial total)		35%



Red pine | Pin rouge

Pinus resinosa

The reported distribution and abundance of red pine in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Pitch pine | Pin rigide

Pinus rigida

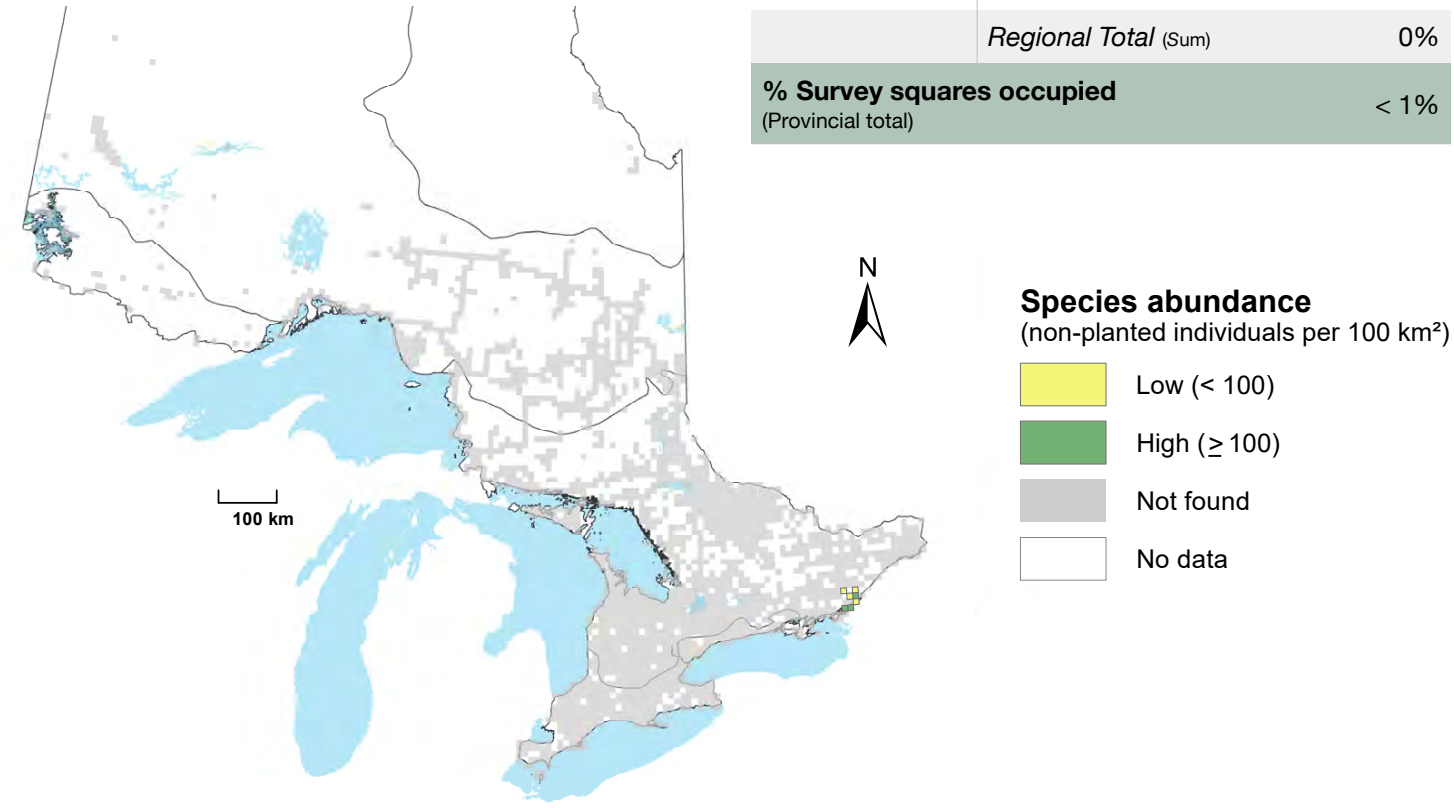
Native to Ontario

Reported distribution: Pitch pine had a very limited distribution in Ontario and was observed in a single area of seven survey squares in the southeast portion of the Great Lakes - St. Lawrence forest region. This population, within the Frontenanc Arch, represents the only known occurrence of the species in the province.

Reported abundance: Pitch pine had a very low overall abundance in Ontario; fewer than 100 individuals were found in three of the seven survey squares in which they were identified. As a species dependent upon fire for natural regeneration, fire prevention activities within its natural range have likely reduced seedling recruitment.

Table 11 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

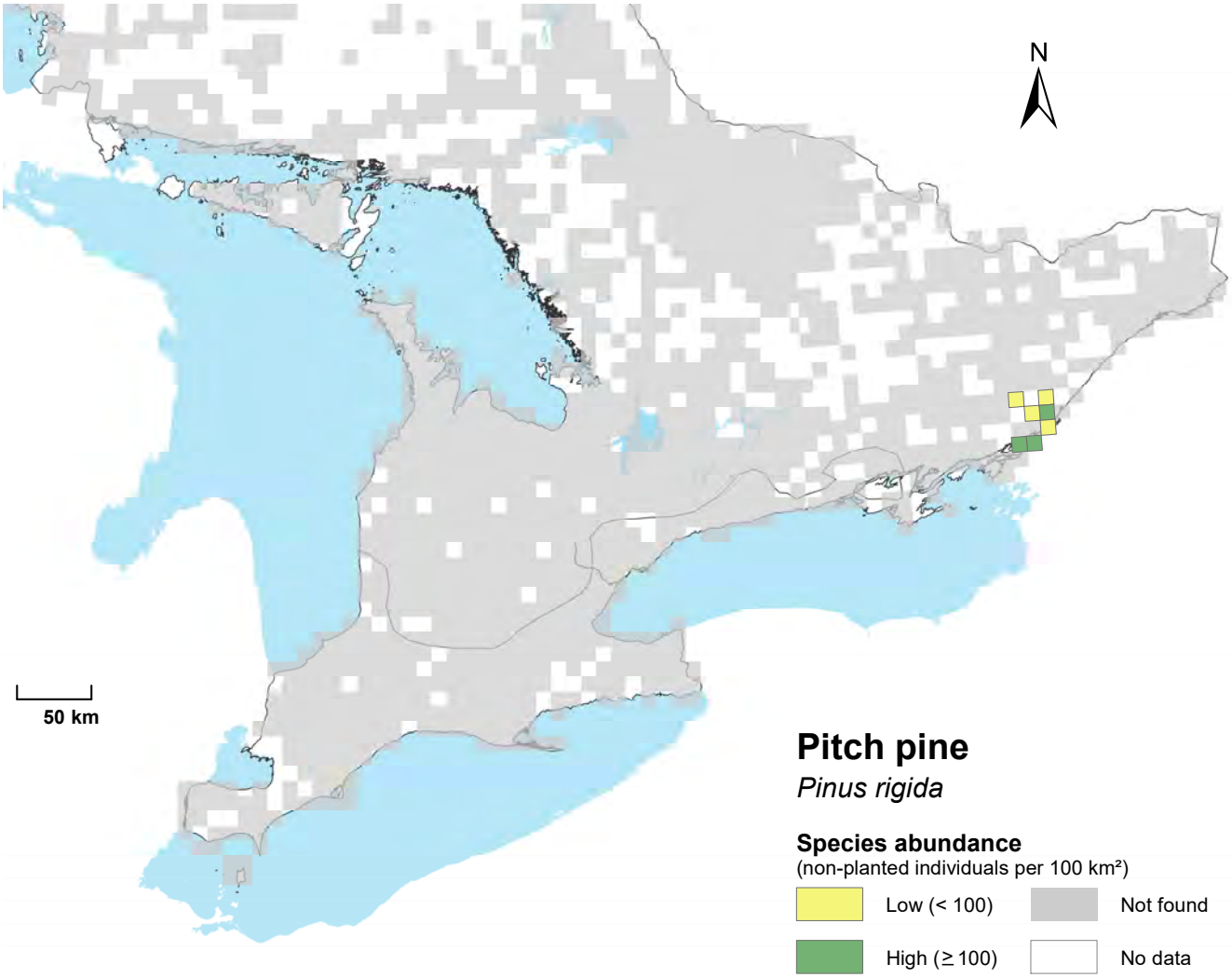
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
% Survey squares occupied (Provincial total)		< 1%



Pitch pine | Pin rigide

Pinus rigida

The reported distribution and abundance of pitch pine in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eastern white pine | Pin blanc

Pinus strobus

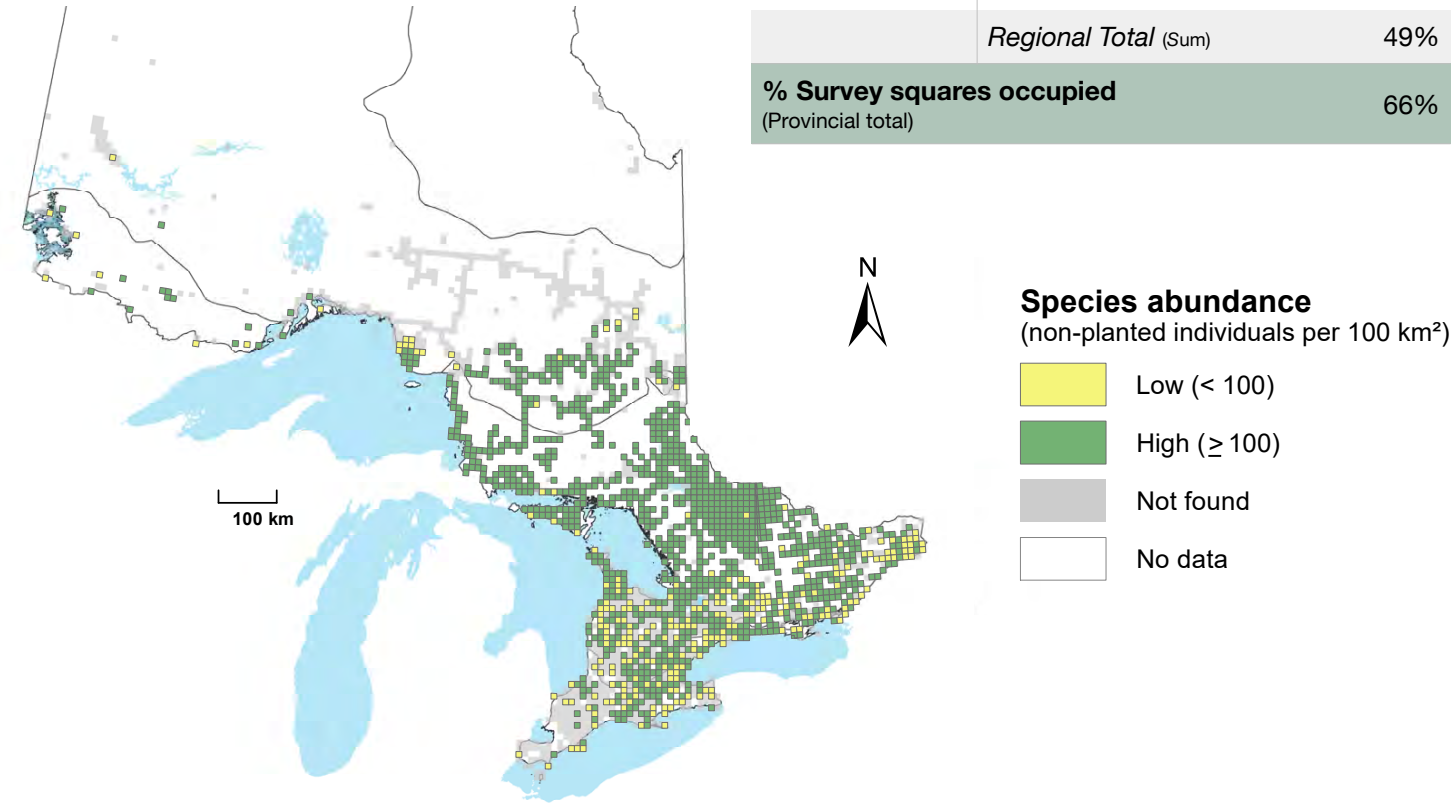
Native to Ontario

Reported distribution: The distribution of eastern white pine spanned the deciduous and Great Lakes - St. Lawrence forest regions. The species was also found in survey squares in the southern portion of the boreal forest. Within the core of its range in Ontario, the distribution of eastern white pine was relatively continuous, occupying 85% of survey squares in the Great Lakes - St. Lawrence region.

Reported abundance: Eastern white pines grew at high abundance (≥ 100 individuals) in the majority of survey squares in which they were identified. The species was provincially abundant but was less frequently encountered in the southern portion of its range.

Table 12 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

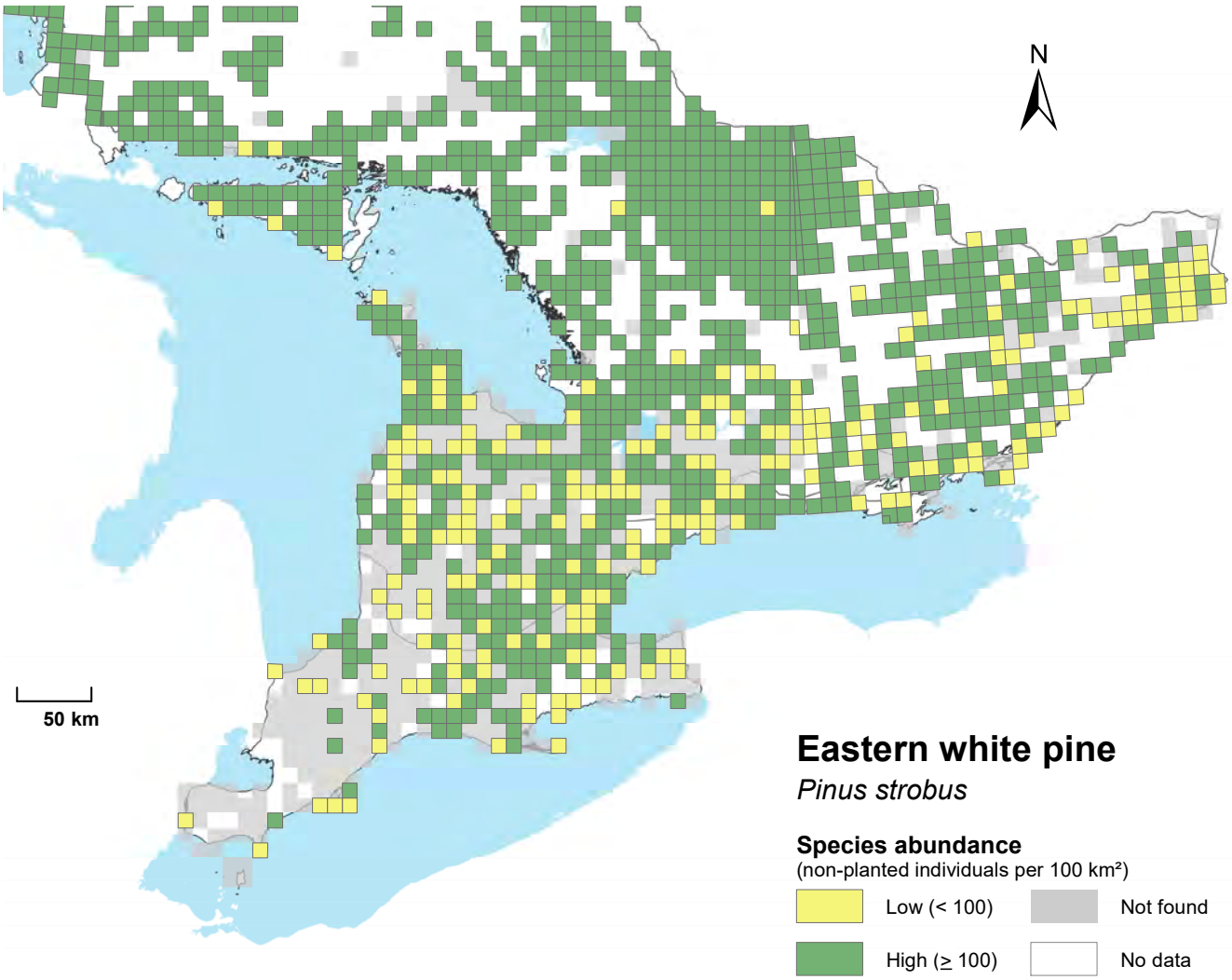
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	30%
	Regional Total (Sum)	34%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	71%
	Regional Total (Sum)	85%
Deciduous	Low (< 100 per 100 km²)	21%
	High (≥ 100 per 100 km²)	28%
	Regional Total (Sum)	49%
% Survey squares occupied (Provincial total)		66%



Eastern white pine | Pin blanc

Pinus strobus

The reported distribution and abundance of eastern white pine in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Scots pine | Pin sylvestre

Pinus sylvestris

Introduced to Ontario

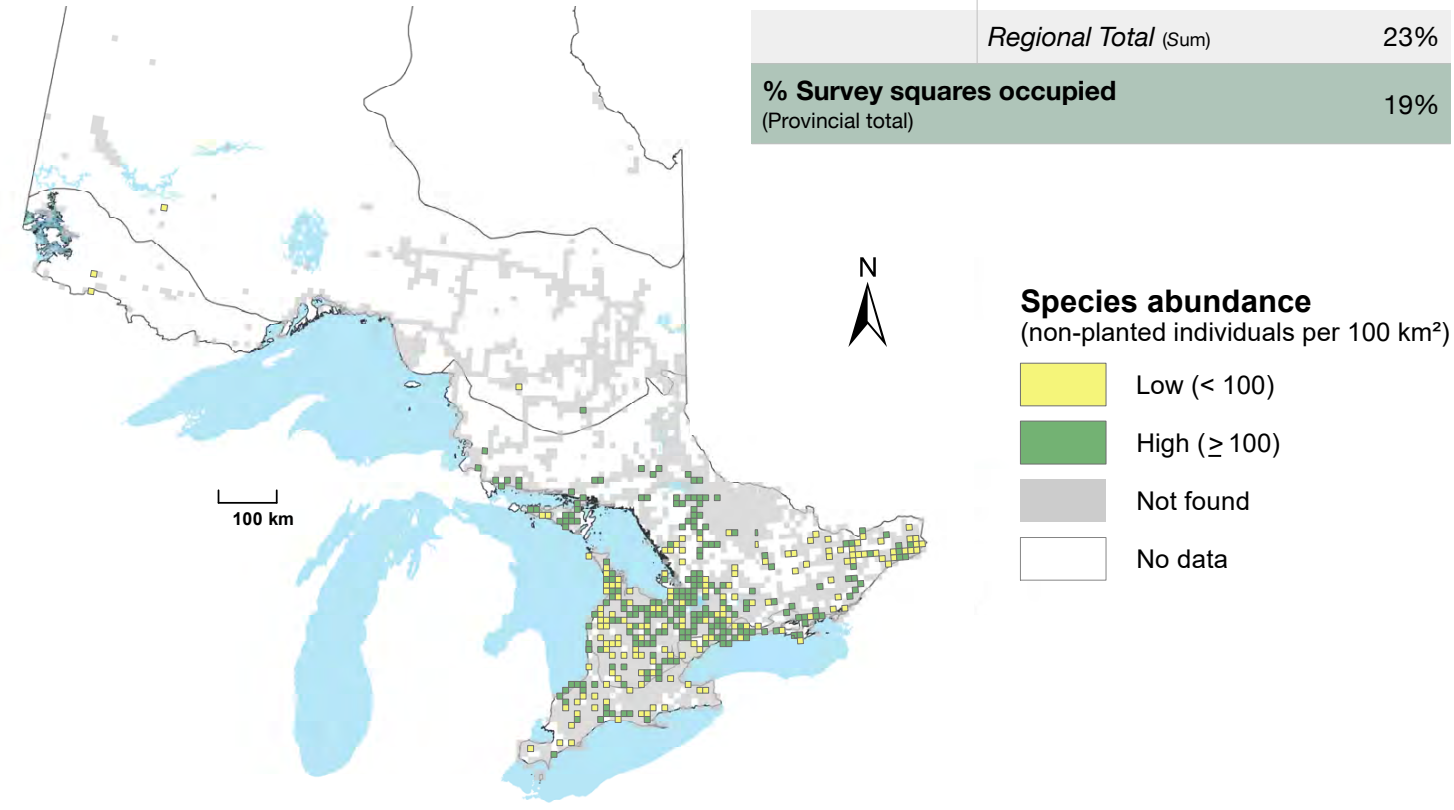
Reported distribution: Scots pine is an introduced species in Ontario. Non-planted individuals were mainly observed in the deciduous forest region and the southern portion of the Great Lakes - St. Lawrence forest. Within its range, the species has a relatively patchy distribution, likely owing to its status as an introduced species. Scots pine was observed in 19% of total squares surveyed.

Reported abundance: Scots pines were found to be moderately abundant at the provincial level. The species grew at low (< 100 individuals) and high (≥ 100 individuals) abundance in relatively equal measures.

The distribution and abundance of Scots pine reflects its ability to naturalize in Ontario, where it is commonly planted.

Table 13 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

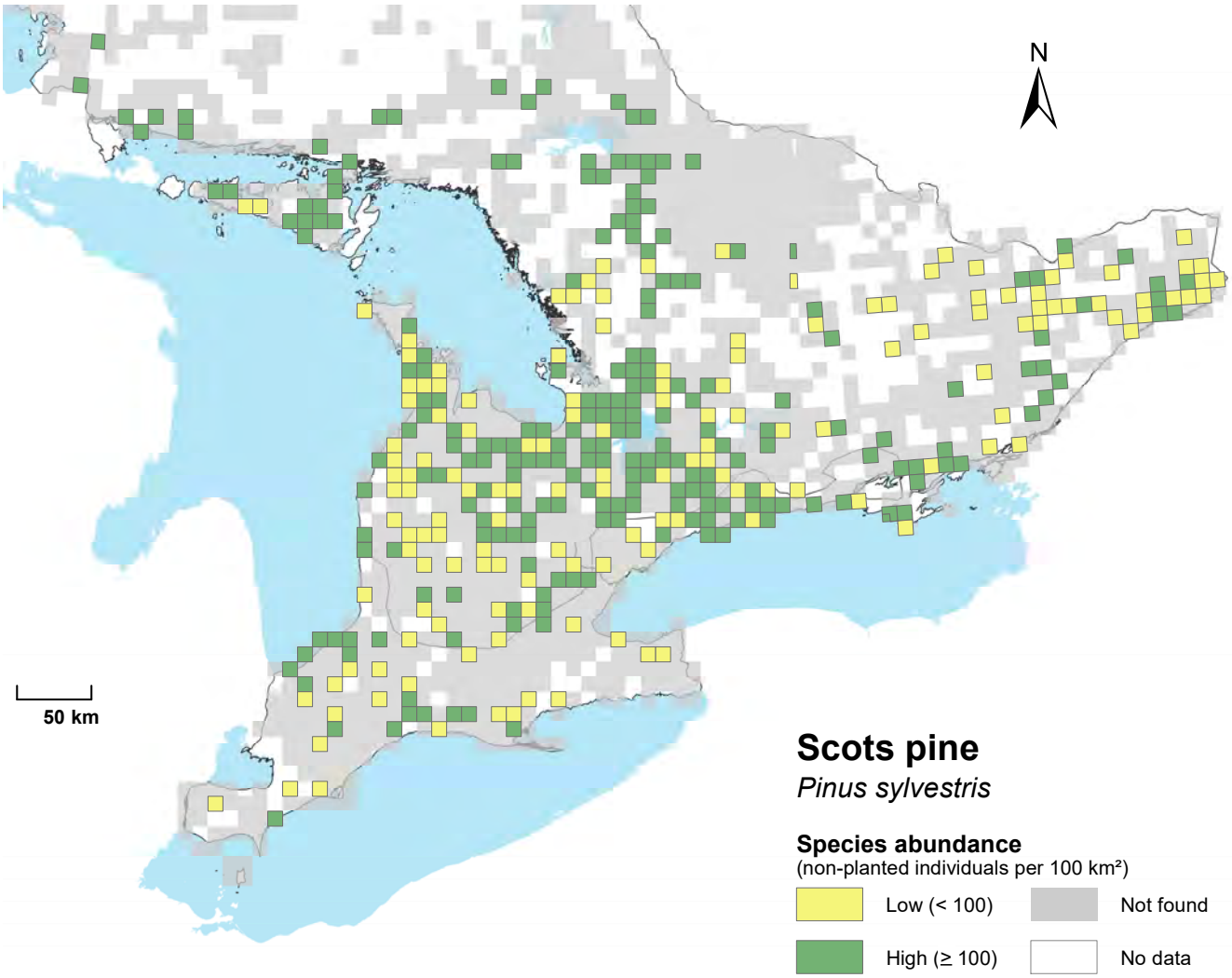
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1 %
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	16%
	Regional Total (Sum)	26%
Deciduous	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	13%
	Regional Total (Sum)	23%
% Survey squares occupied (Provincial total)		19%



Scots pine | Pin sylvestre

Pinus sylvestris

The reported distribution and abundance of Scots pine in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eastern white-cedar | Thuya occidental

Thuja occidentalis

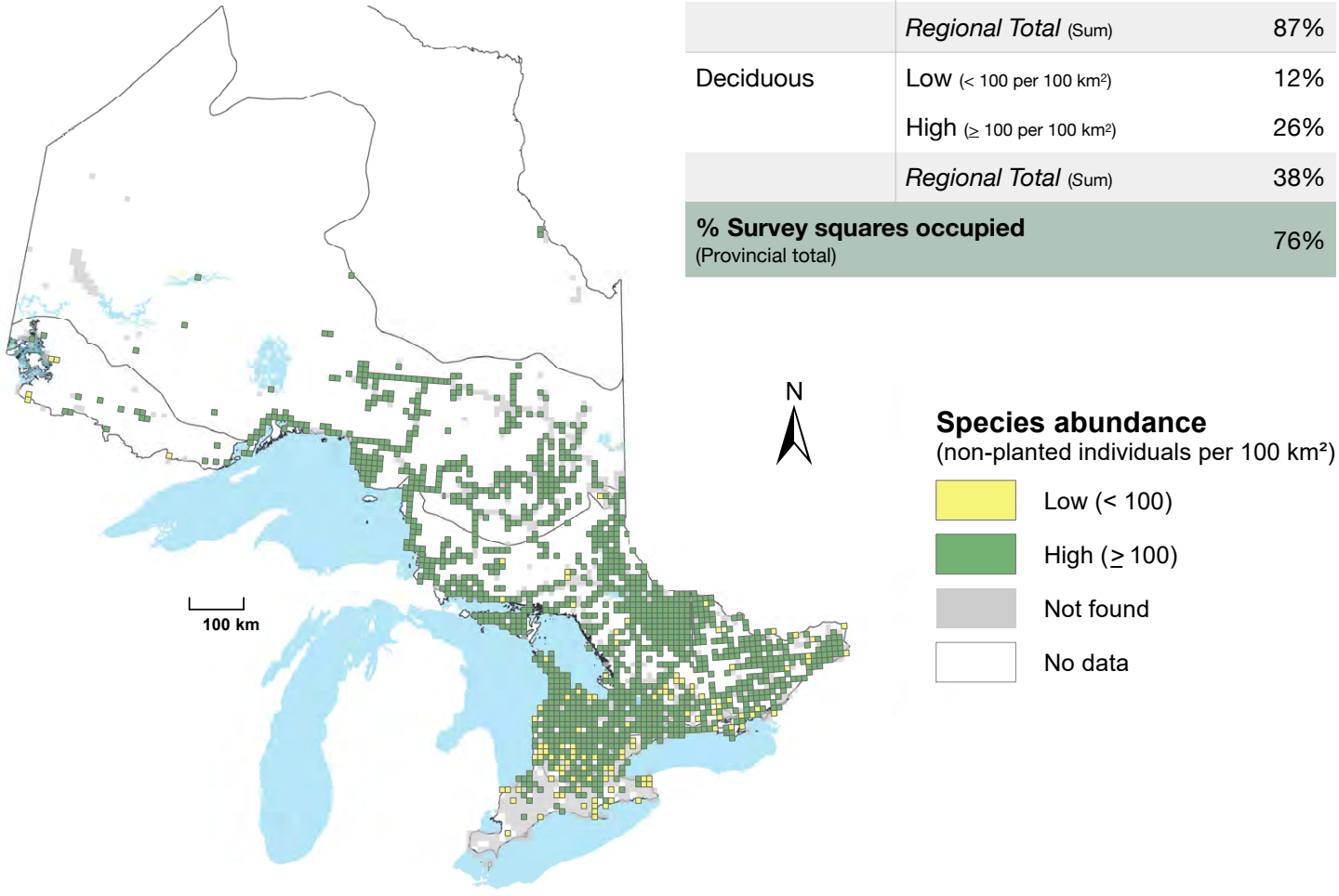
Native to Ontario

Reported distribution: Eastern white-cedars were widespread throughout Ontario and were identified in 71% and 87% of surveyed squares in the boreal and Great Lakes - St. Lawrence forest regions, respectively. The southern edge of the species range extended into the deciduous forest region where the species was identified in 38% of survey squares.

Reported abundance: Eastern white-cedars were highly abundant throughout their range; most survey squares in which they were identified had ≥ 100 individuals.

Table 14 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

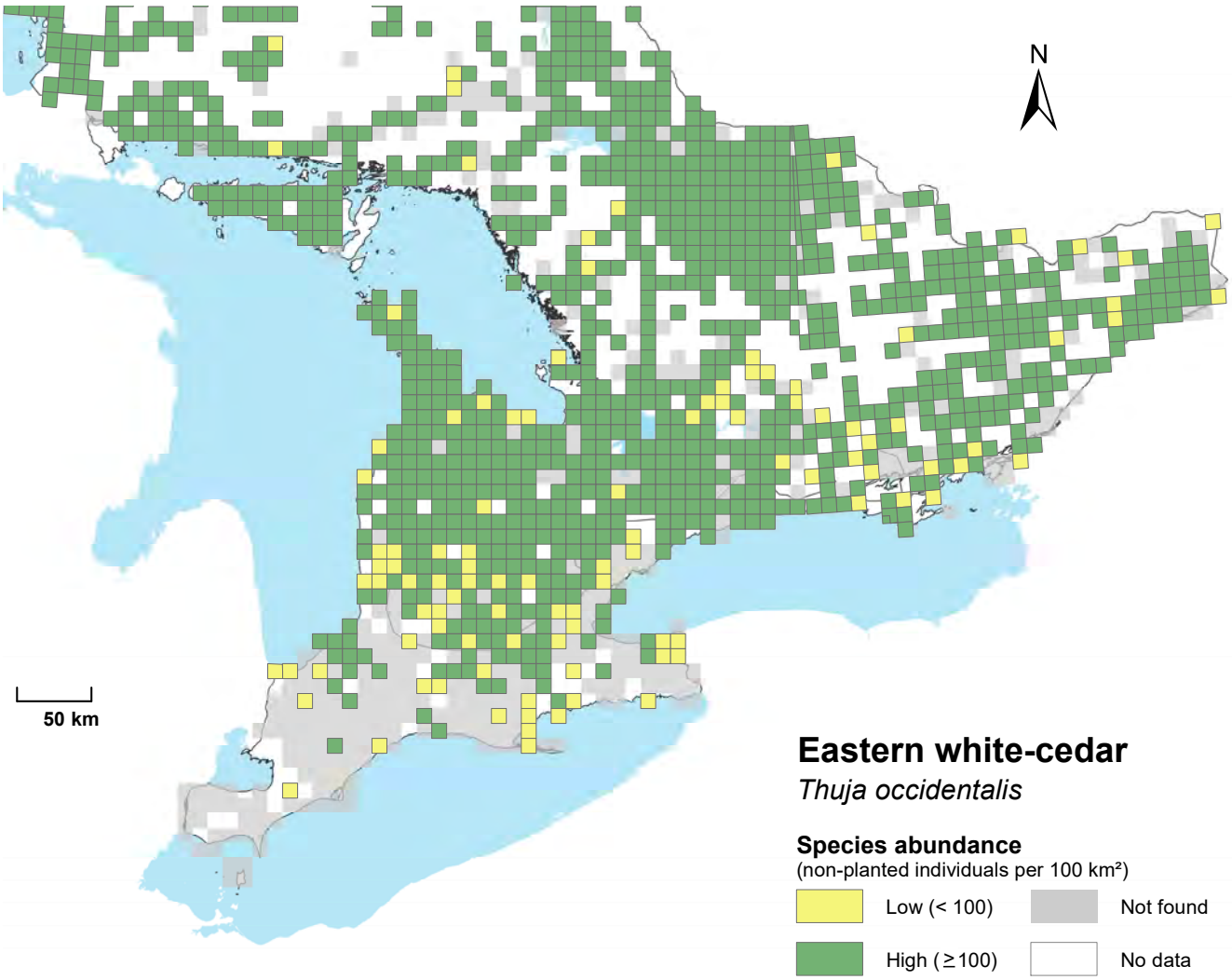
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	71%
	Regional Total (Sum)	71%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	81%
	Regional Total (Sum)	87%
Deciduous	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	26%
	Regional Total (Sum)	38%
% Survey squares occupied (Provincial total)		76%



Eastern white-cedar | Thuya occidental

Thuja occidentalis

The reported distribution and abundance of eastern white-cedar in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eastern hemlock | Pruche de Canada

Tsuga canadensis

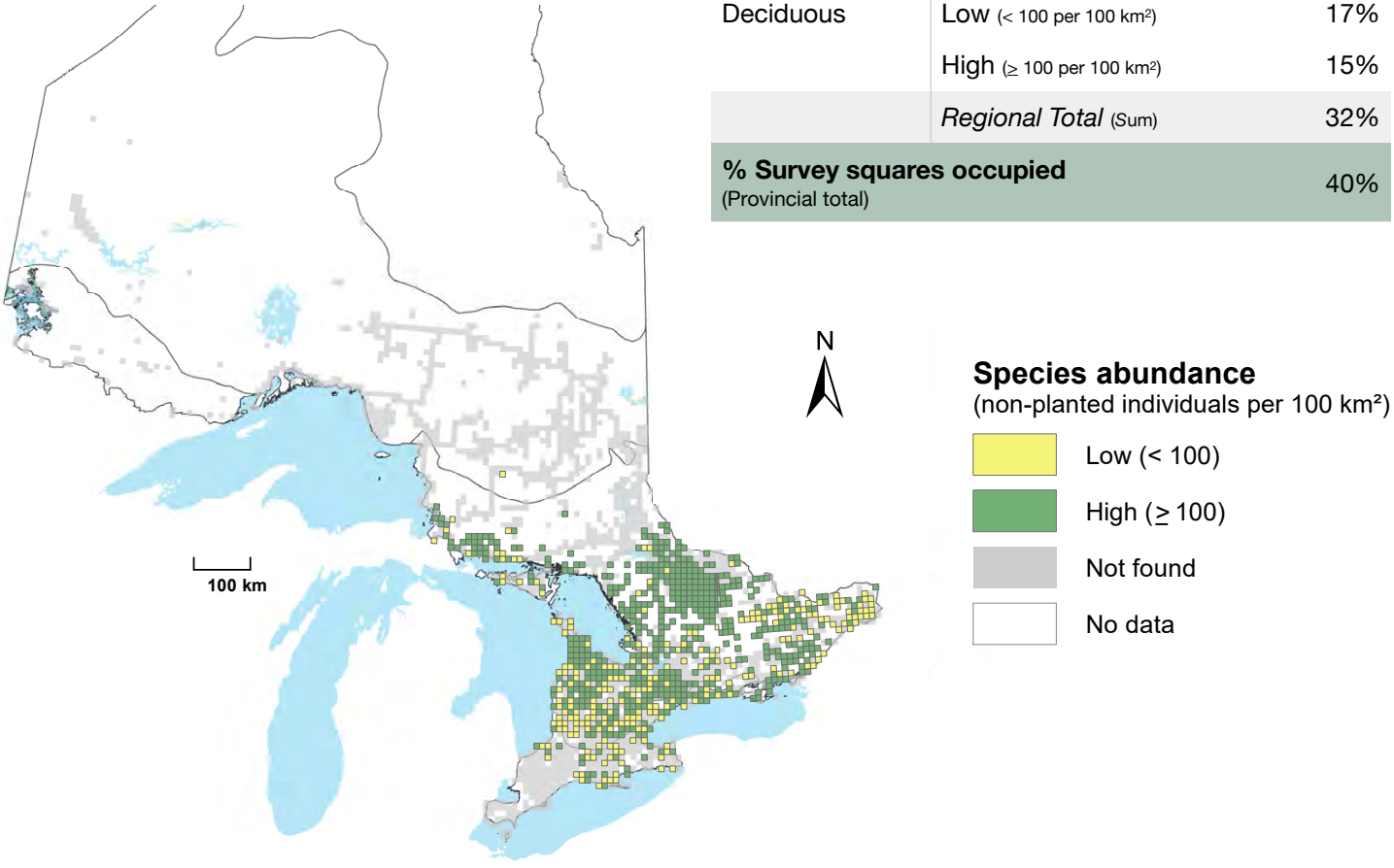
Native to Ontario

Reported distribution: The distribution of eastern hemlock was found to lie below 47°N latitude. The species was identified in survey squares throughout the lower two thirds of the Great Lakes-St. Lawrence forest region (58% of surveyed squares) and the northern portion of the deciduous forest region (32% of survey squares).

Reported abundance: Eastern hemlock was abundant throughout its range, with the majority of survey squares in which the species was identified having ≥ 100 individuals.

Table 15 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

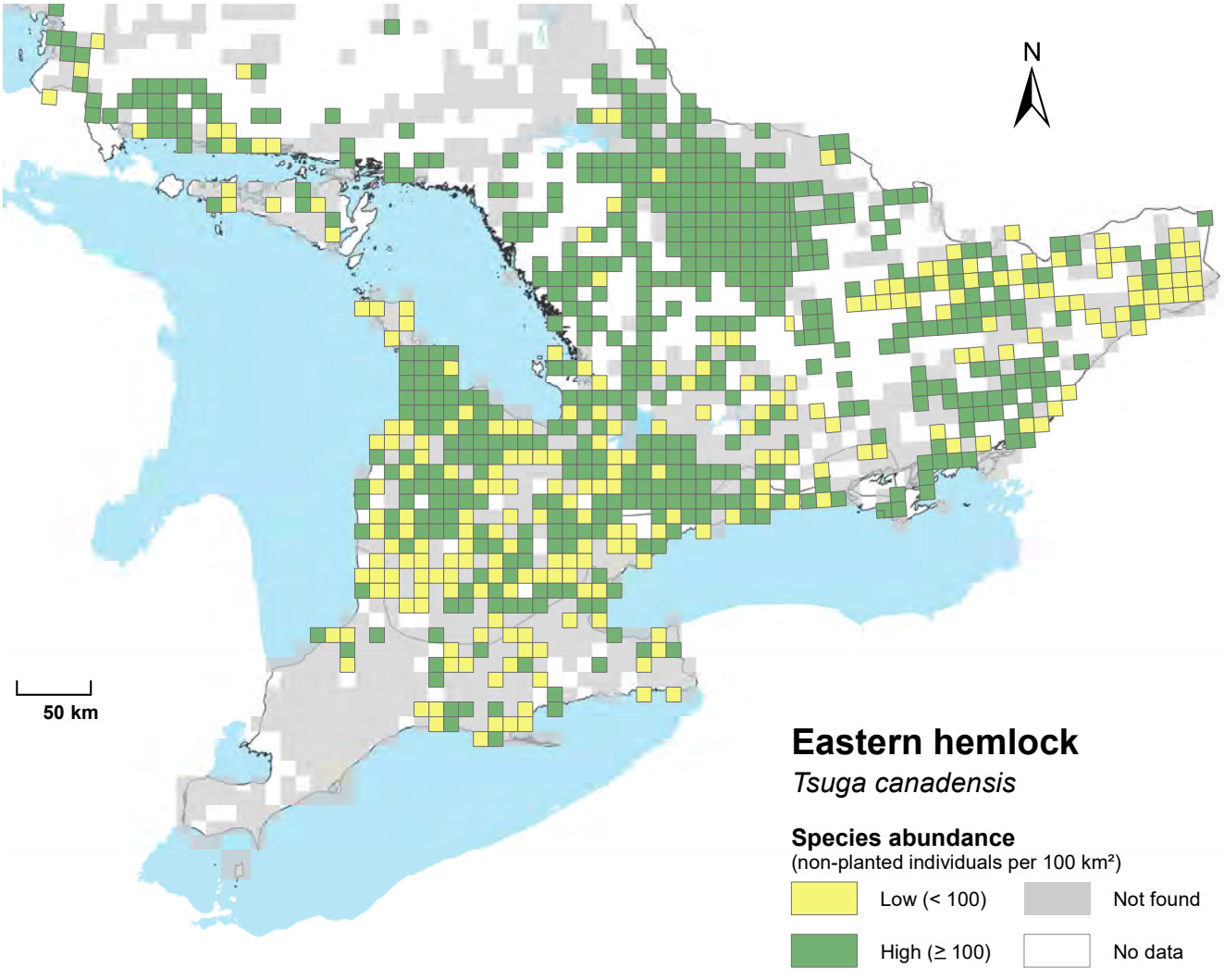
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	16%
	High (≥ 100 per 100 km²)	42%
	Regional Total (Sum)	58%
Deciduous	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	15%
	Regional Total (Sum)	32%
% Survey squares occupied (Provincial total)		40%



Eastern hemlock | Pruche de Canada

Tsuga canadensis

The reported distribution and abundance of eastern hemlock in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Manitoba maple | Érable à Giguère

Acer negundo

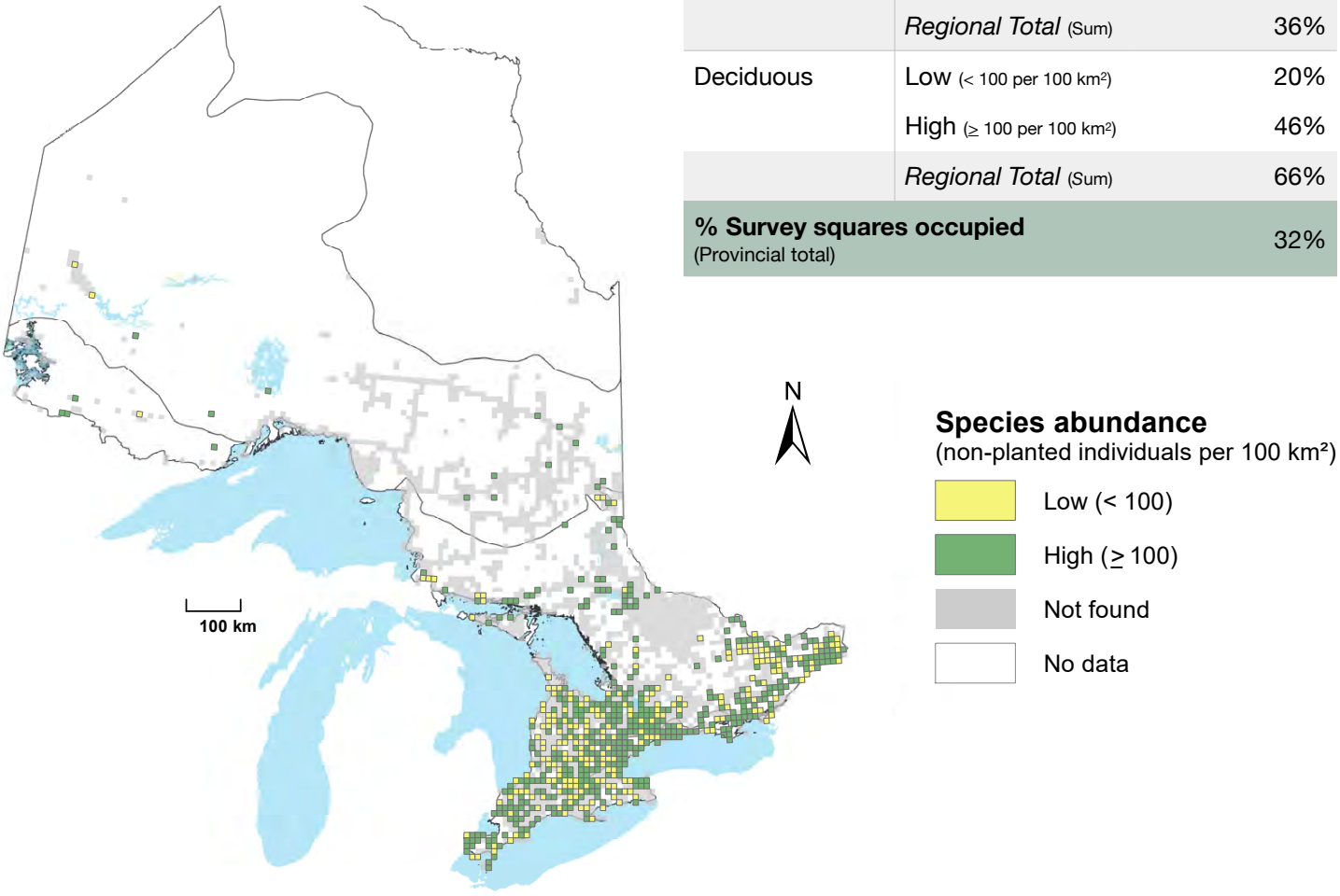
Native to Ontario

Reported distribution: Manitoba maples were generally found south of 46°N latitude in Ontario. The species was identified throughout the deciduous forest region where it occupied 66% of squares surveyed, and in the southern portion of the Great Lakes - St. Lawrence forest. Manitoba maples were rarely encountered in the boreal forest region.

Reported abundance: Manitoba maple was relatively abundant throughout southwestern Ontario. It grew at high abundance (≥ 100 individuals) in many areas throughout its range.

Table 16 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

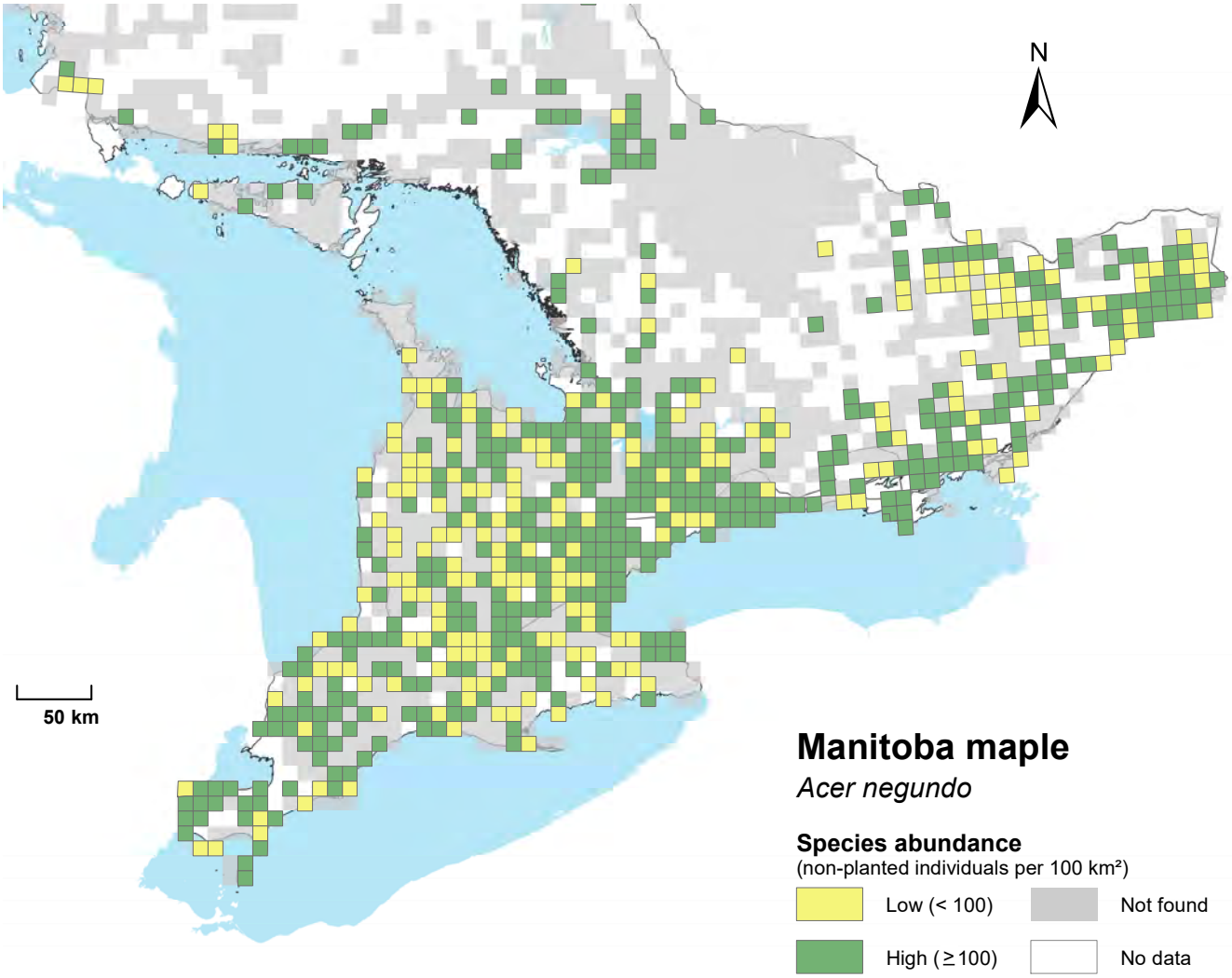
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	4%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	23%
	Regional Total (Sum)	36%
Deciduous	Low (< 100 per 100 km²)	20%
	High (≥ 100 per 100 km²)	46%
	Regional Total (Sum)	66%
% Survey squares occupied (Provincial total)		32%



Manitoba maple | Érable à Giguère

Acer negundo

The reported distribution and abundance of Manitoba maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Striped maple | Érable de Pennsylvanie

Acer pensylvanicum

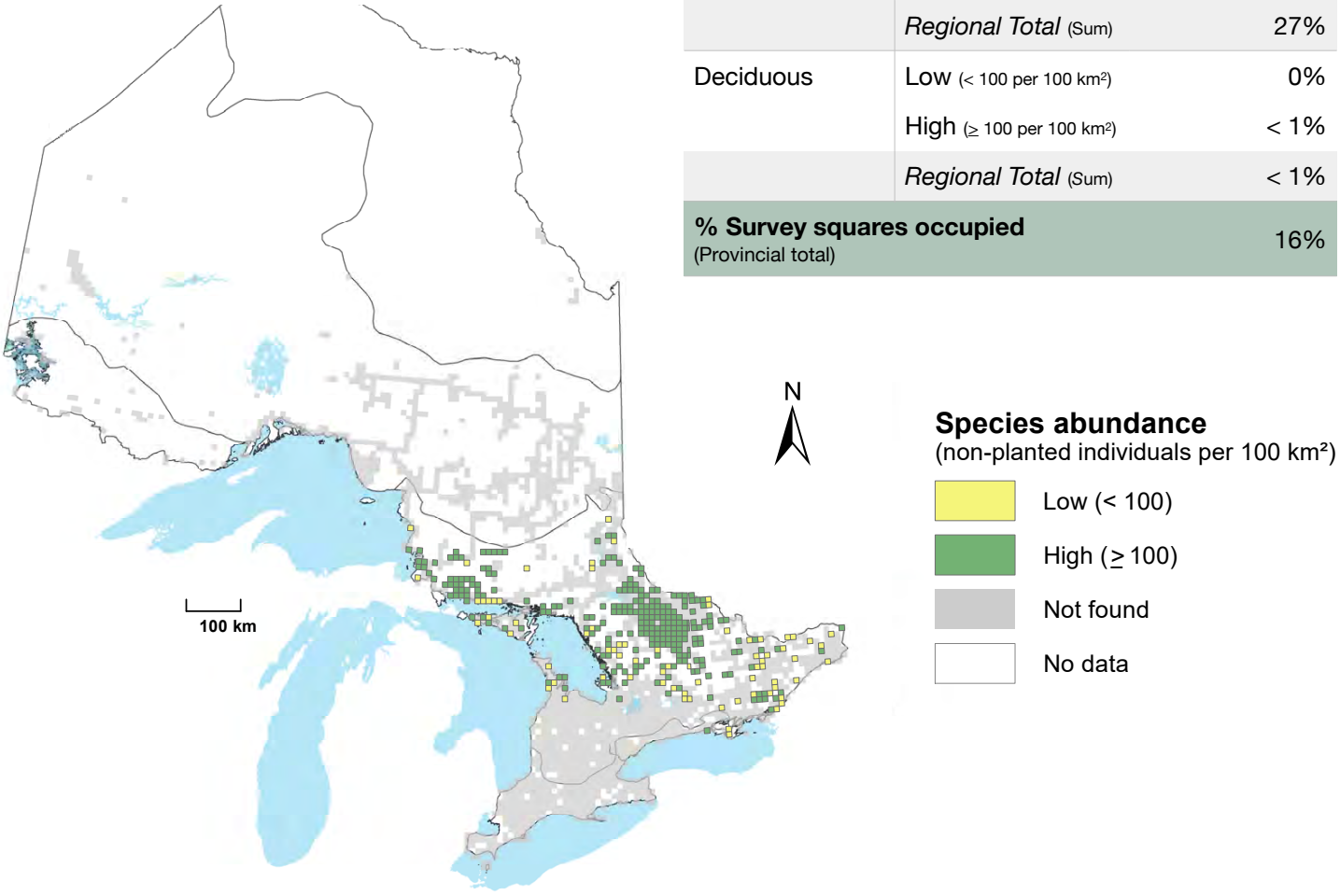
Native to Ontario

Reported distribution: The distribution of striped maple was largely confined to the northern portion of the Great Lakes - St. Lawrence forest region where it occupied 27% of surveyed squares. The species was largely absent from the deciduous and boreal regions.

Reported abundance: Striped maple occurred most commonly at high levels of abundance within its range; the majority of survey squares in which it was identified had ≥ 100 individuals. The species had a very low abundance in the deciduous forest region.

Table 17 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

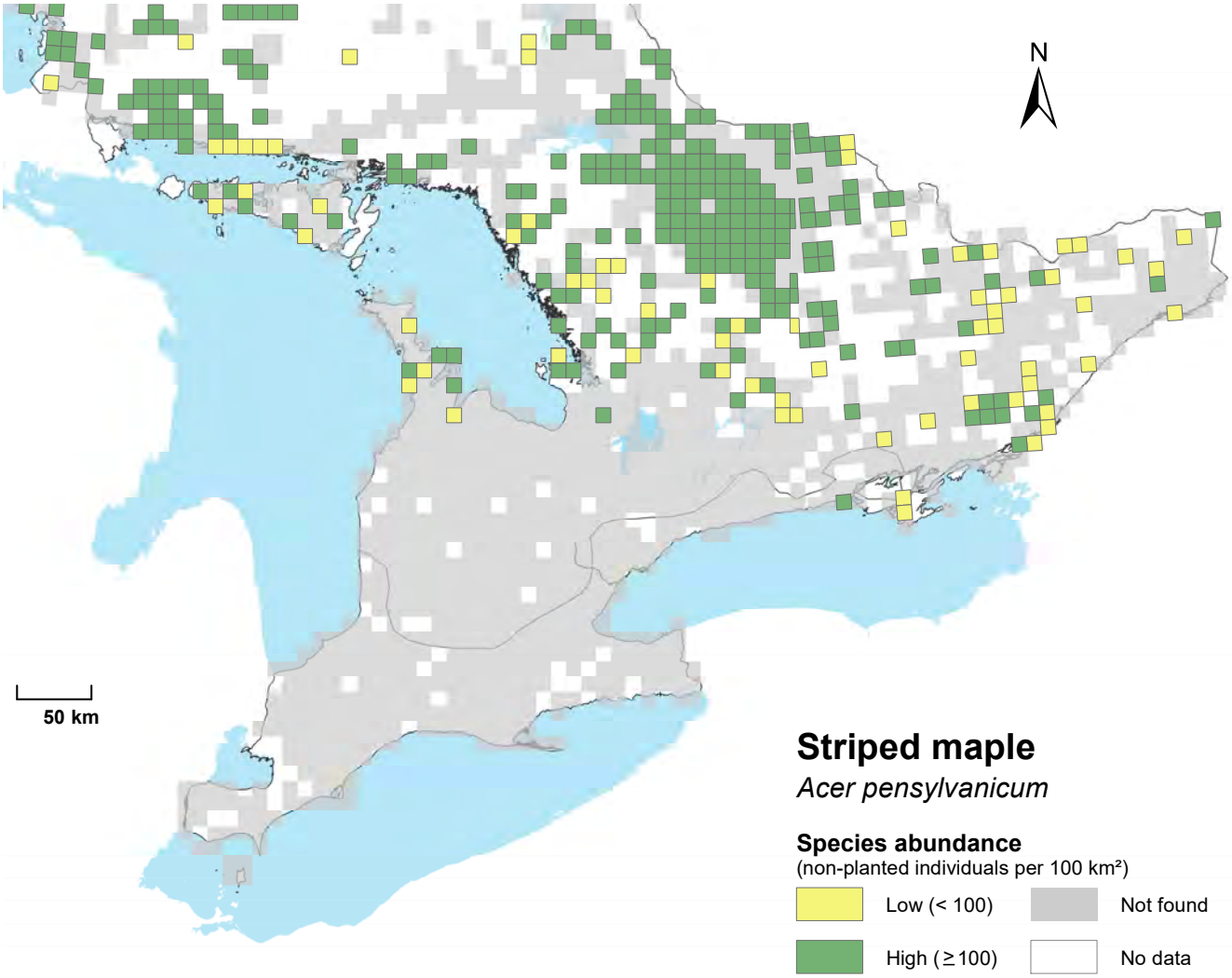
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	21%
	Regional Total (Sum)	27%
Deciduous	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
% Survey squares occupied (Provincial total)		16%



Striped maple | Érable de Pennsylvanie

Acer pensylvanicum

The reported distribution and abundance of striped maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Norway maple | Érable de Norvège

Acer platanoides

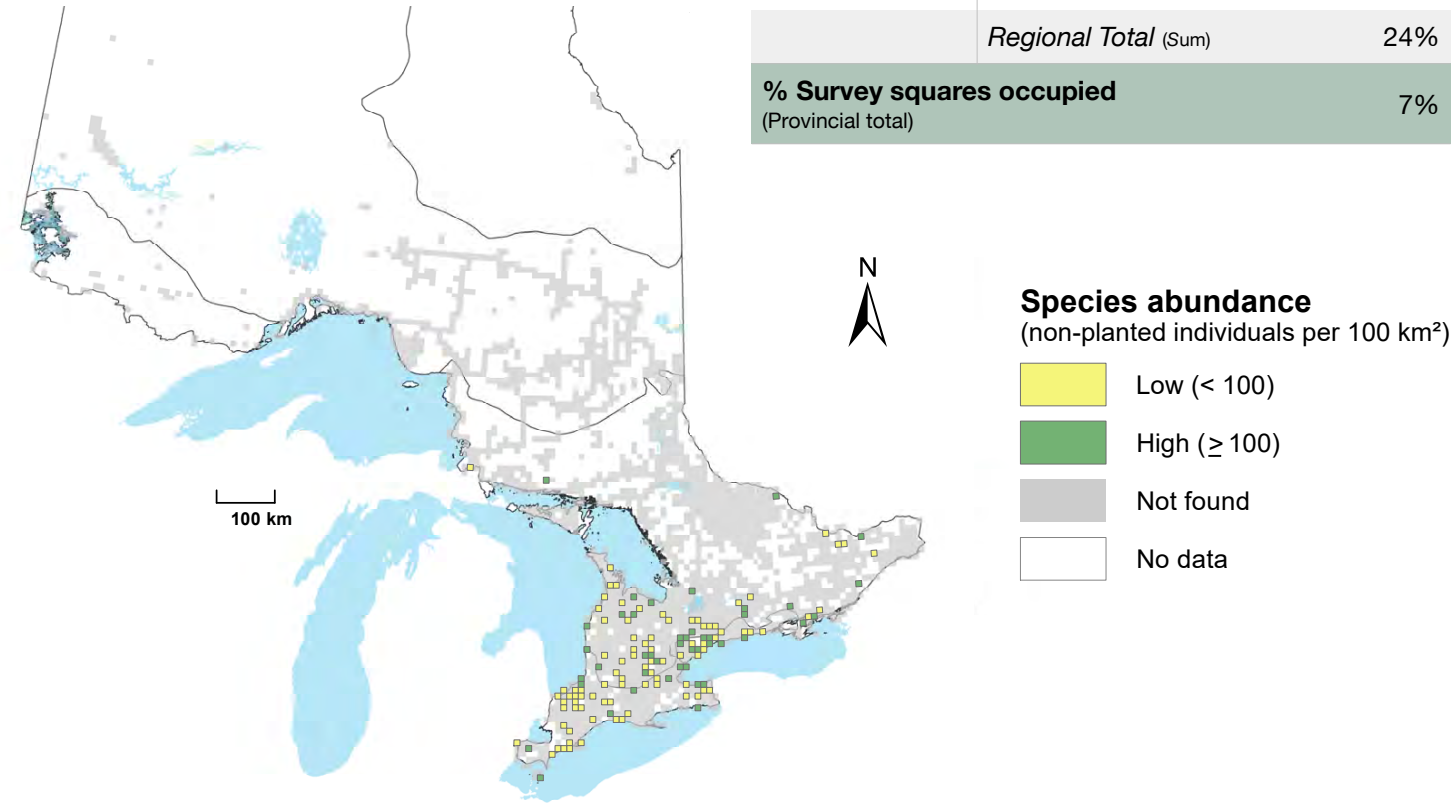
Introduced to Ontario

Reported distribution: Norway maple is an introduced species in Ontario. Although it is widely planted throughout the province, non-planted individuals had a somewhat limited distribution; Norway maples were only identified in survey squares in the Great Lakes - St. Lawrence and deciduous forest regions. Within its introduced range, individuals were primarily identified in areas with larger human populations.

Reported abundance: Non-planted Norway maple had a relatively low overall abundance and most survey squares had fewer than 100 individuals. However, the occurrence of non-planted Norway maple throughout southern Ontario indicates that the species is readily able to establish in the province.

Table 18 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

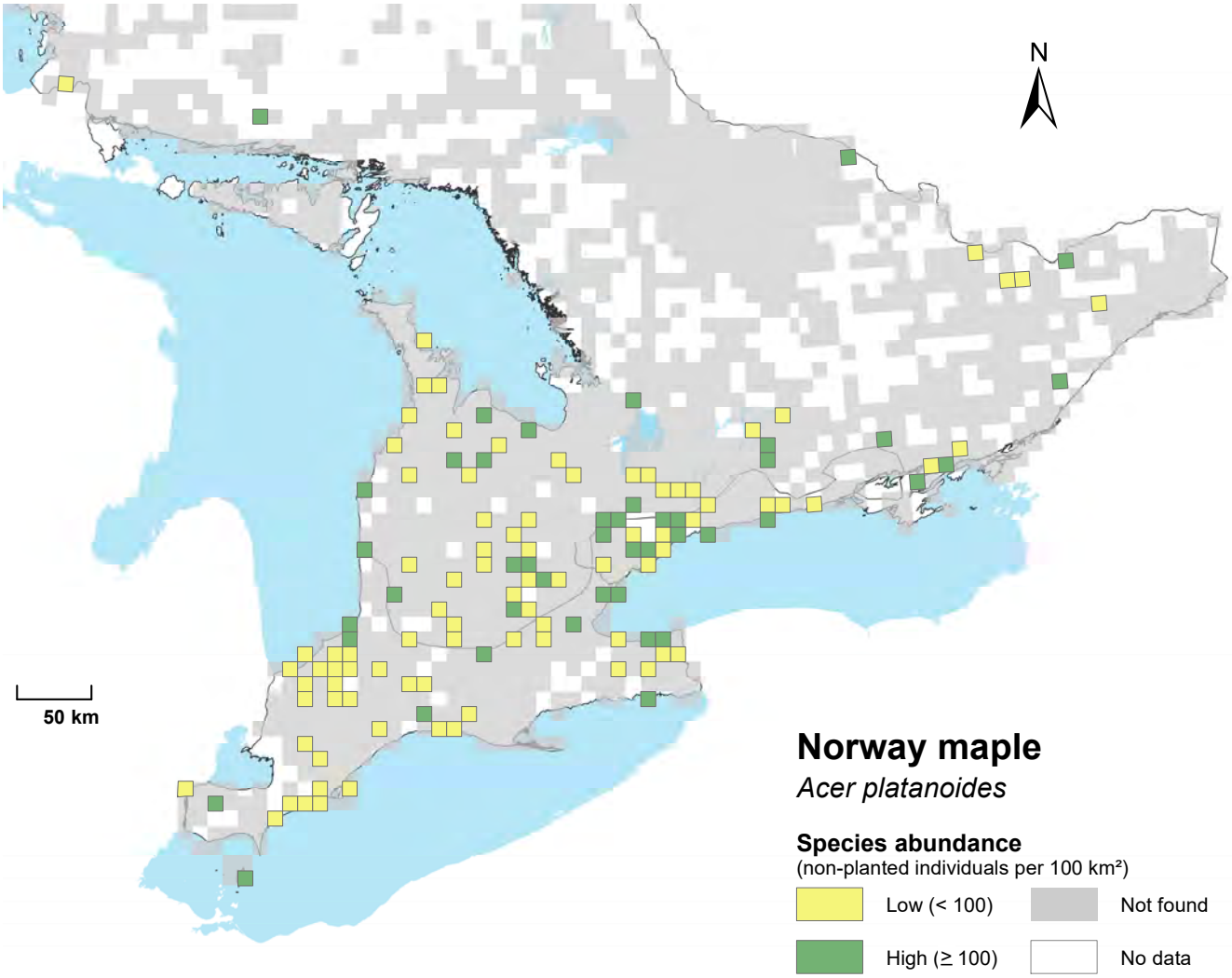
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	5%
Deciduous	Low (< 100 per 100 km²)	16%
	High (≥ 100 per 10 km²)	8%
	Regional Total (Sum)	24%
% Survey squares occupied (Provincial total)		7%



Norway maple | Érable de Norvège

Acer platanoides

The reported distribution and abundance of Norway maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Red maple | Érable rouge

Acer rubrum

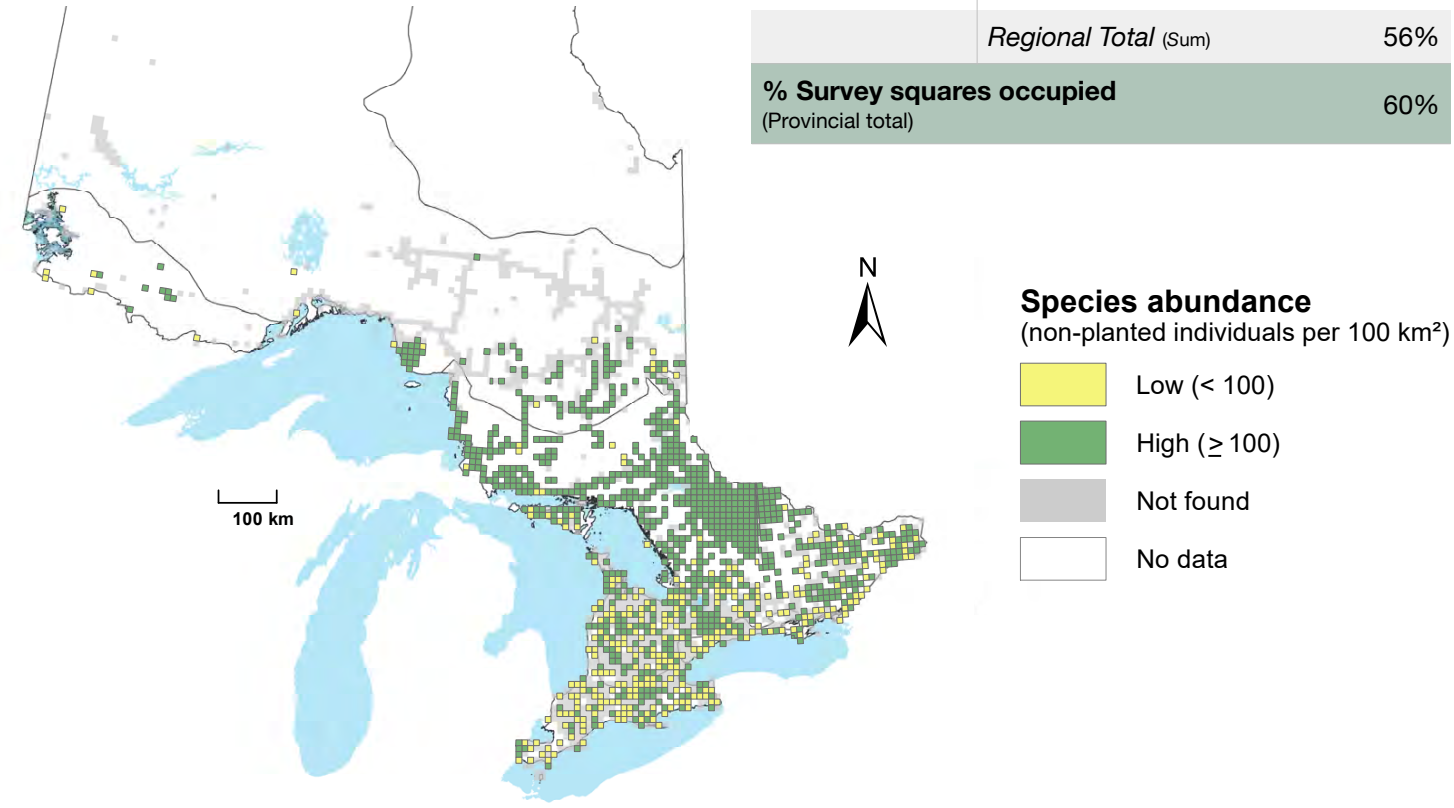
Native to Ontario

Reported distribution: Red maples were widely distributed throughout Ontario and were identified in the majority of survey squares south of the boreal forest region. The species was found in survey squares extending to the southwestern-most areas of the deciduous forest region, although its occurrence was more discontinuous below 45°N.

Reported abundance: Red maples were relatively abundant in southern and central Ontario; the species was commonly observed to grow at high abundance (≥ 100 individuals) throughout much of the Great Lakes - St. Lawrence forest region. Red maples were less abundant in the deciduous region and were infrequently encountered in survey squares above ~48°N.

Table 19 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

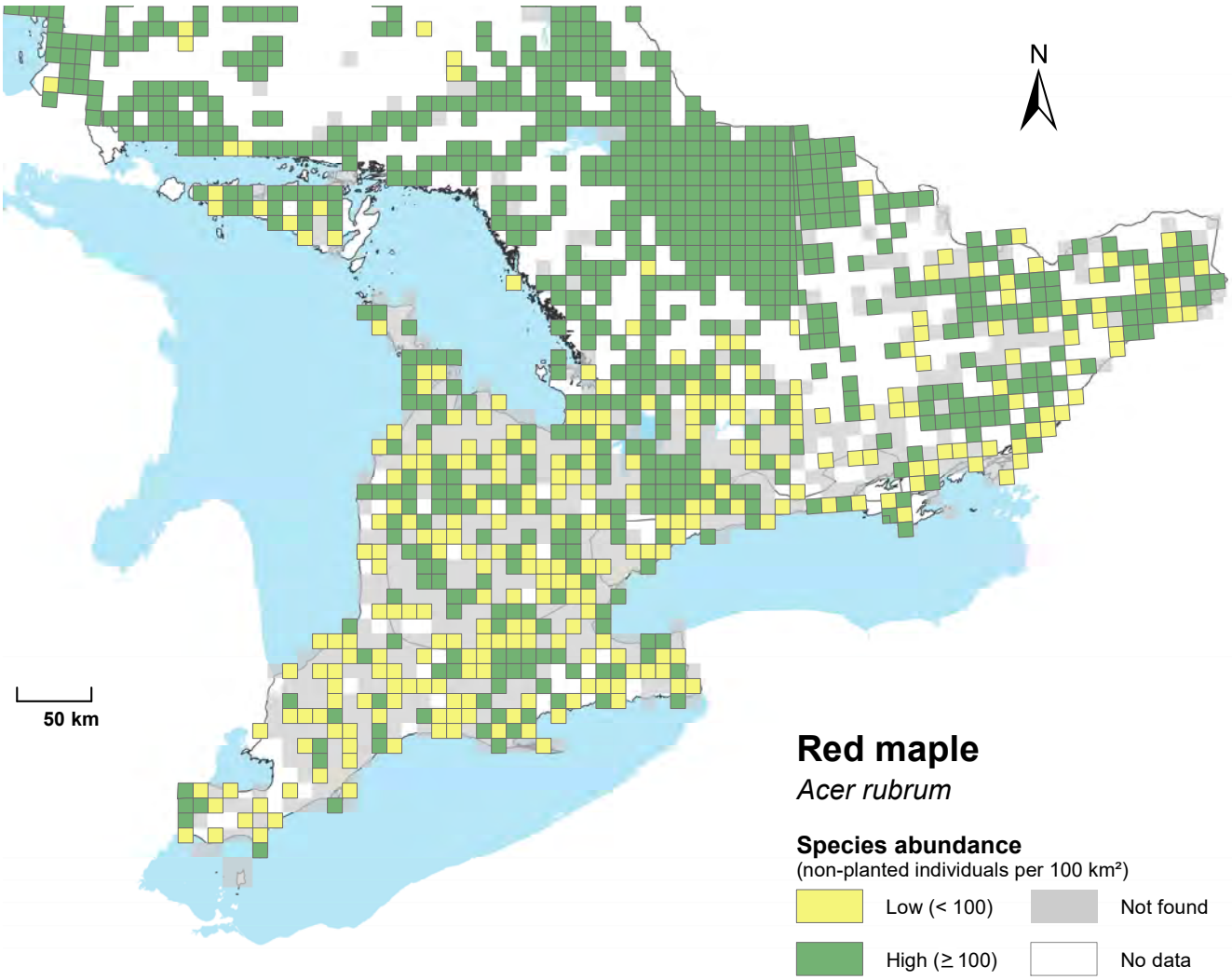
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	20%
	Regional Total (Sum)	22%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	16%
	High (≥ 100 per 100 km²)	61%
	Regional Total (Sum)	77%
Deciduous	Low (< 100 per 100 km²)	34%
	High (≥ 100 per 100 km²)	22%
	Regional Total (Sum)	56%
% Survey squares occupied (Provincial total)		60%



Red maple | Érable rouge

Acer rubrum

The reported distribution and abundance of red maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Freeman's maple | Érable de Freeman

Acer × freemanii

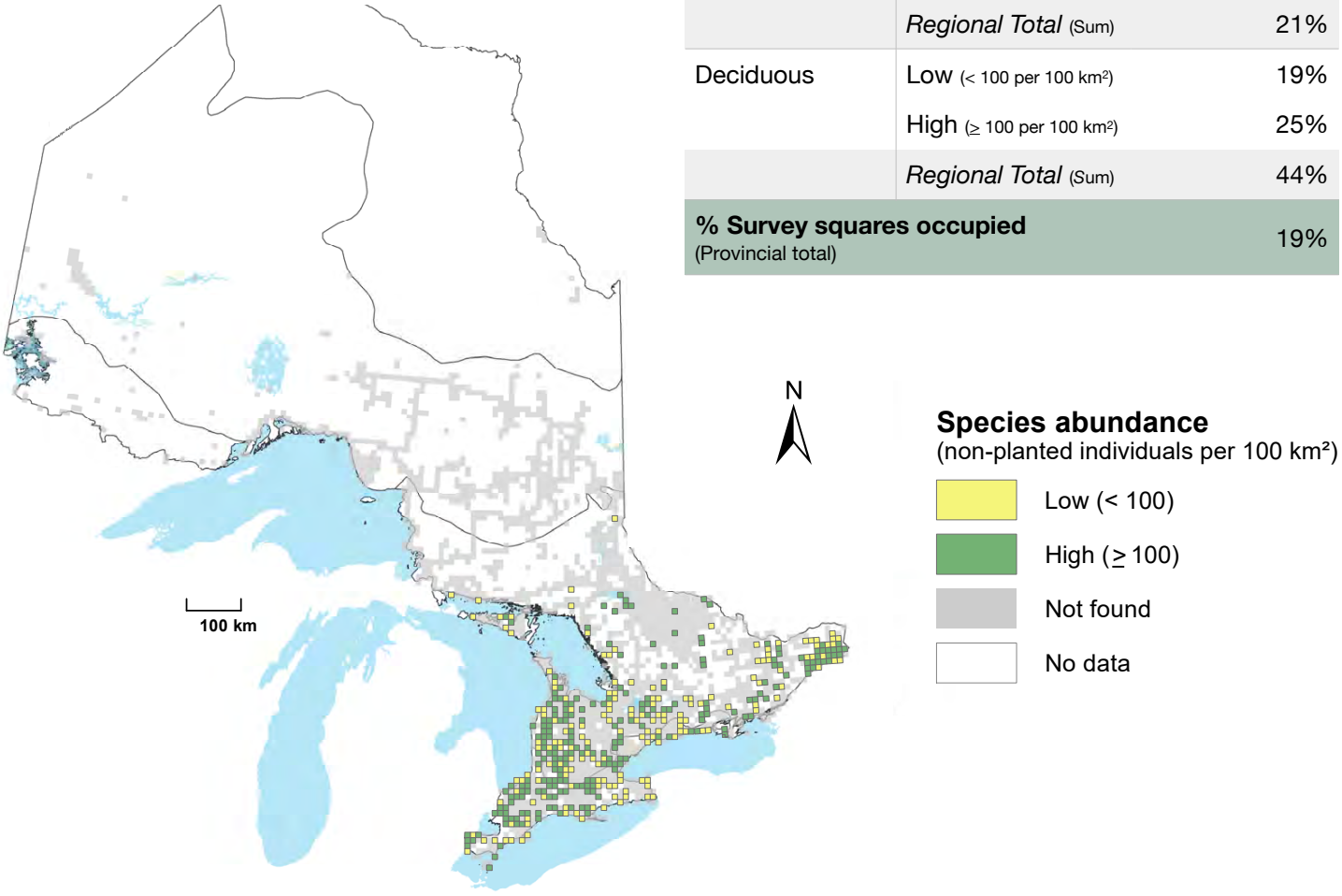
Native to Ontario

Reported distribution: Freeman's maple, a hybrid of *A. rubrum* and *A. saccharinum*, was observed in southern and central Ontario in areas below 47°N latitude. Within its range, the species had a discontinuous distribution, often occurring in isolated clusters of survey squares. The species occupied 21% of squares surveyed in the Great Lakes - St. Lawrence and in 44% of squares in the deciduous forest region.

Reported abundance: Freeman's maple had a low to moderate overall abundance in Ontario and was most common in southern and southwestern Ontario.

Table 20 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

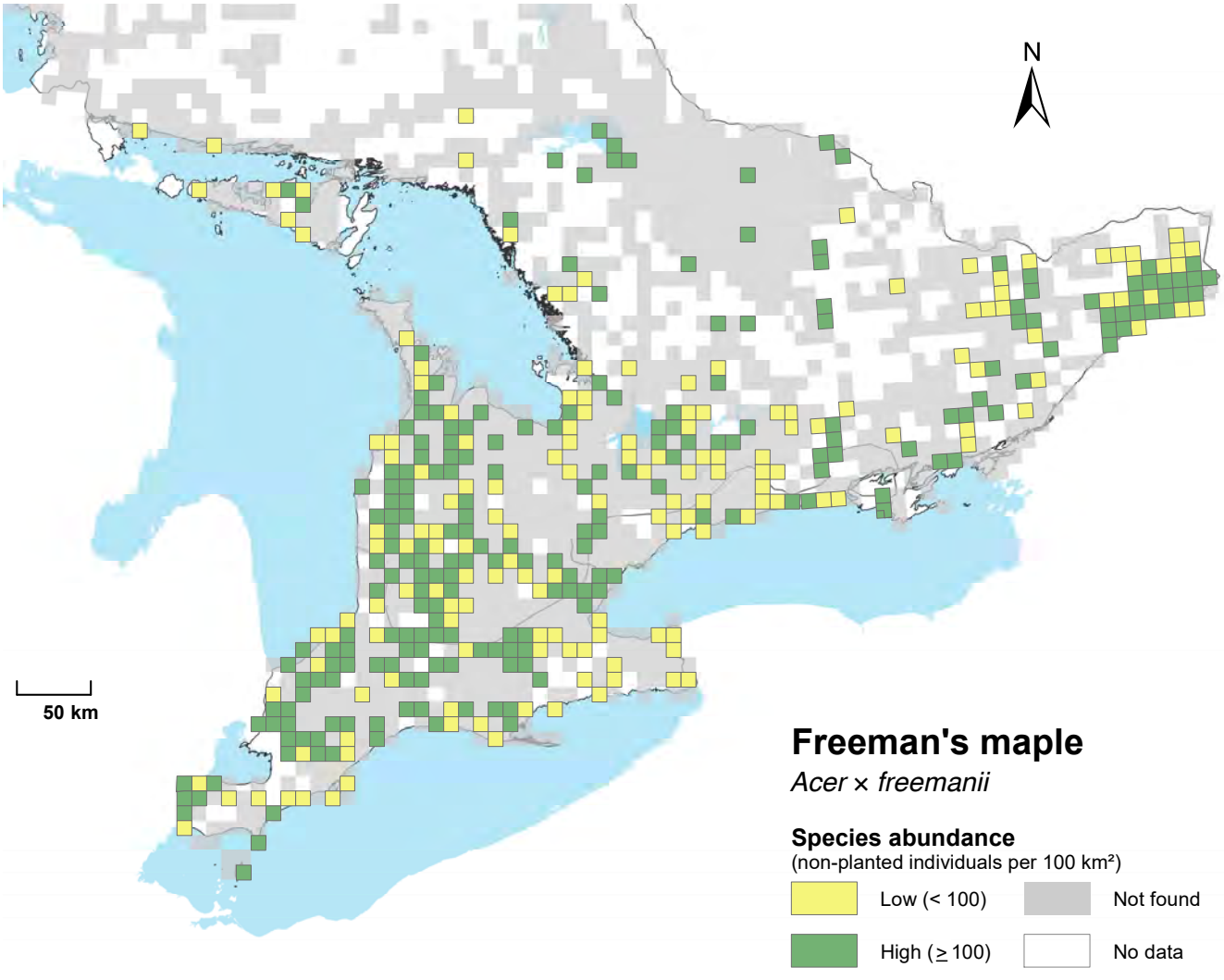
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	12%
	Regional Total (Sum)	21%
Deciduous	Low (< 100 per 100 km²)	19%
	High (≥ 100 per 100 km²)	25%
	Regional Total (Sum)	44%
% Survey squares occupied (Provincial total)		19%



Freeman's maple | Érable de Freeman

Acer × freemanii

The reported distribution and abundance of Freeman's maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Silver maple | Érable argenté

Acer saccharinum

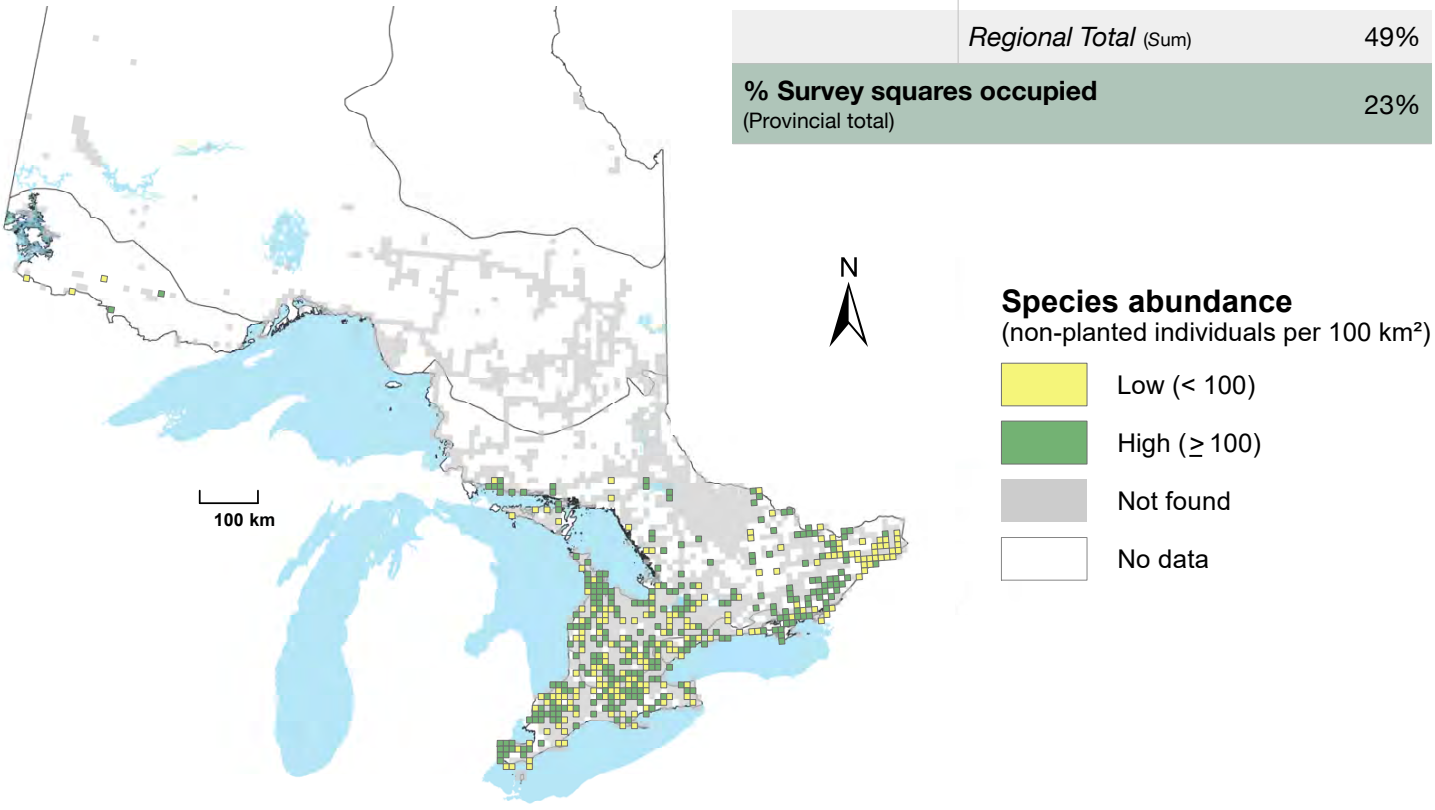
Native to Ontario

Reported distribution: The distribution of silver maple in Ontario was largely confined to the southern third of the province. The most continuous occurrence of the species was in southwestern and eastern Ontario, and no individuals were identified in the boreal forest region. Silver maples were rarely encountered above about 47°N latitude, but individuals were identified in a few isolated survey squares northwest of Lake Superior.

Reported abundance: Silver maples were most abundant in the deciduous forest region (49% of surveyed squares occupied) and had a low overall abundance outside of southern Ontario.

Table 21 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

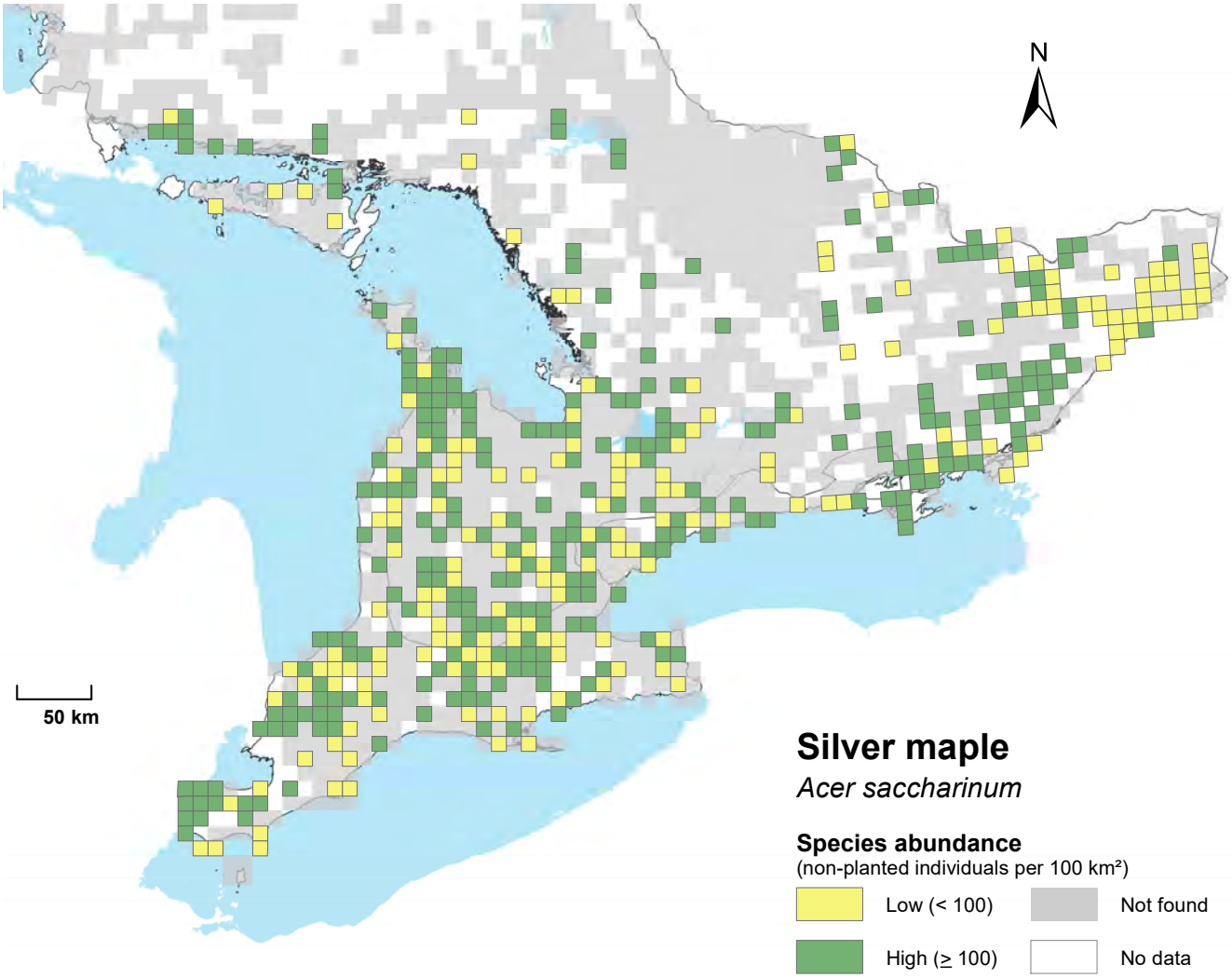
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	16%
	Regional Total (Sum)	26%
Deciduous	Low (< 100 per 100 km²)	20%
	High (≥ 100 per 100 km²)	29%
	Regional Total (Sum)	49%
% Survey squares occupied (Provincial total)		23%



Silver maple | Érable argenté

Acer saccharinum

The reported distribution and abundance of silver maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Black maple | Érable noir

Acer nigrum

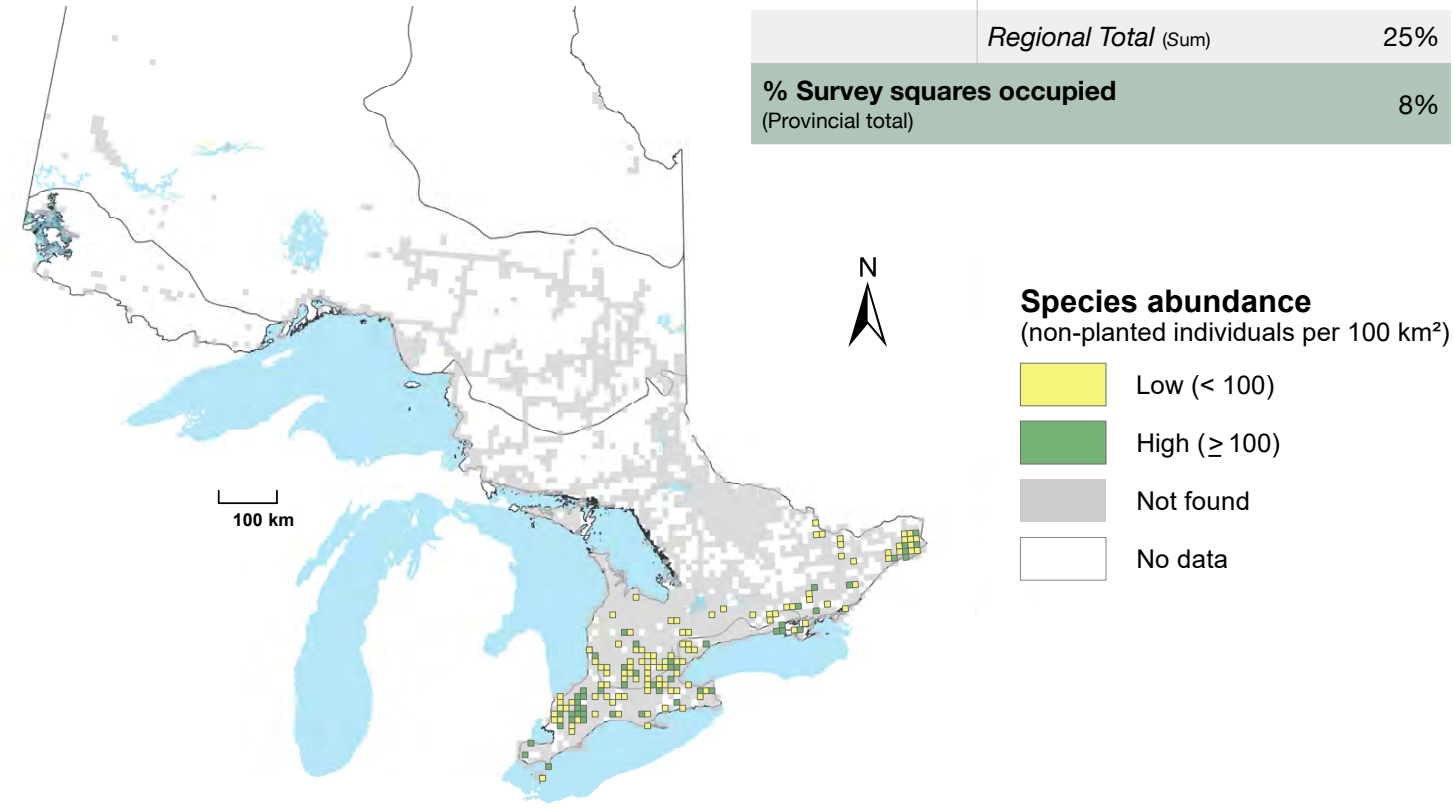
Native to Ontario

Reported distribution: Black maple had a limited distribution in and was primarily found in southwestern and eastern Ontario. The species was identified in survey squares clustered in the deciduous and the southern- and eastern-most sections of the Great Lake - St. Lawrence forest regions. Individuals displaying intermediate characteristics between this species and sugar maple *(A. saccharum)* occur where their ranges overlap. Some taxonomists consider black maple to be a subspecies of sugar maple.

Reported abundance: Black maple often grew at low abundance (< 100 individuals per survey square) where it was observed. The species was most common in the deciduous forest of southwestern Ontario and in eastern Ontario.

Table 22 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

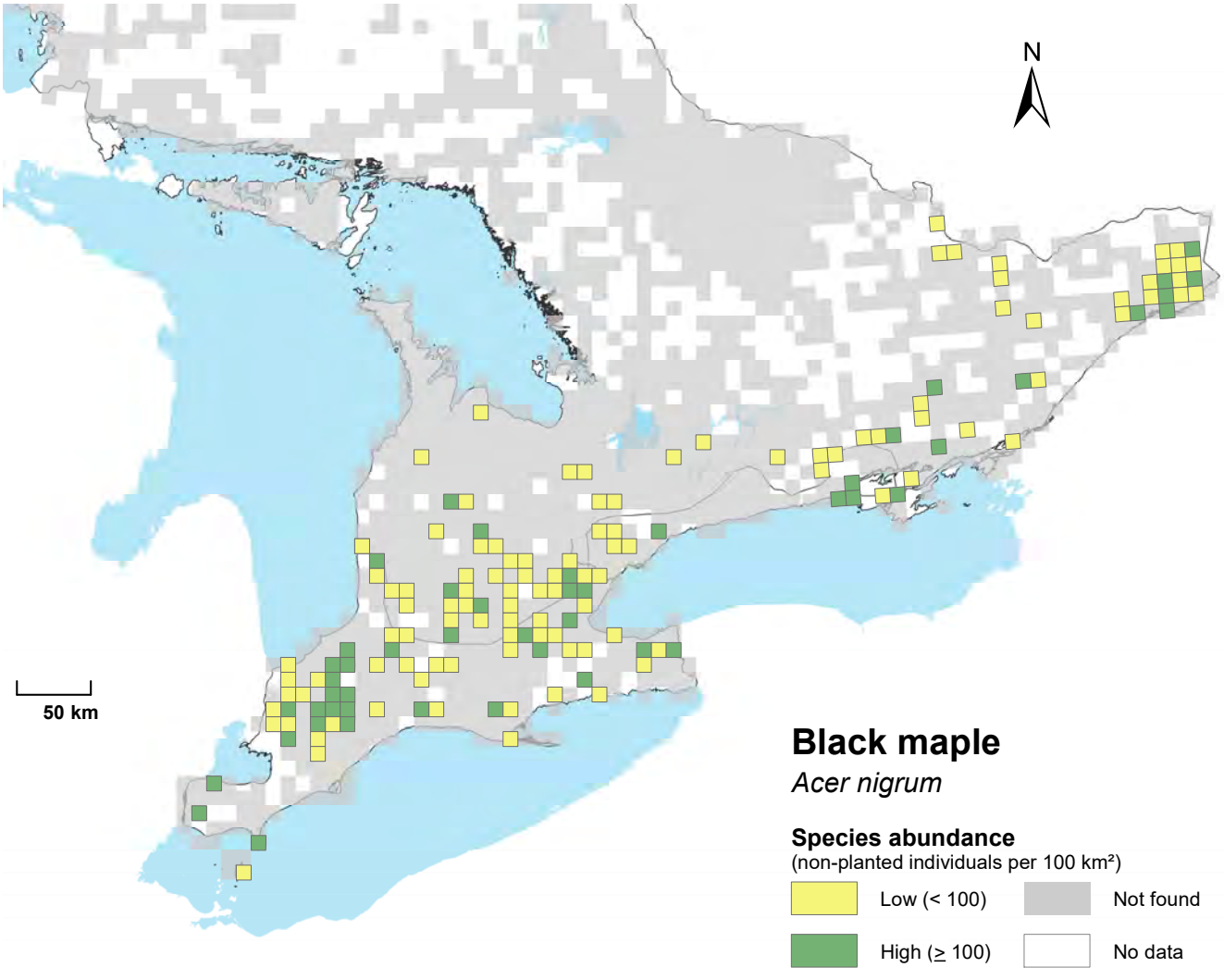
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	5%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	7%
Deciduous	Low (< 100 per 100 km²)	15%
	High (≥ 100 per 100 km²)	10%
	Regional Total (Sum)	25%
% Survey squares occupied (Provincial total)		8%



Black maple | Érable noir

Acer nigrum

The reported distribution and abundance of black maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Sugar maple | Érable à sucre

Acer saccharum

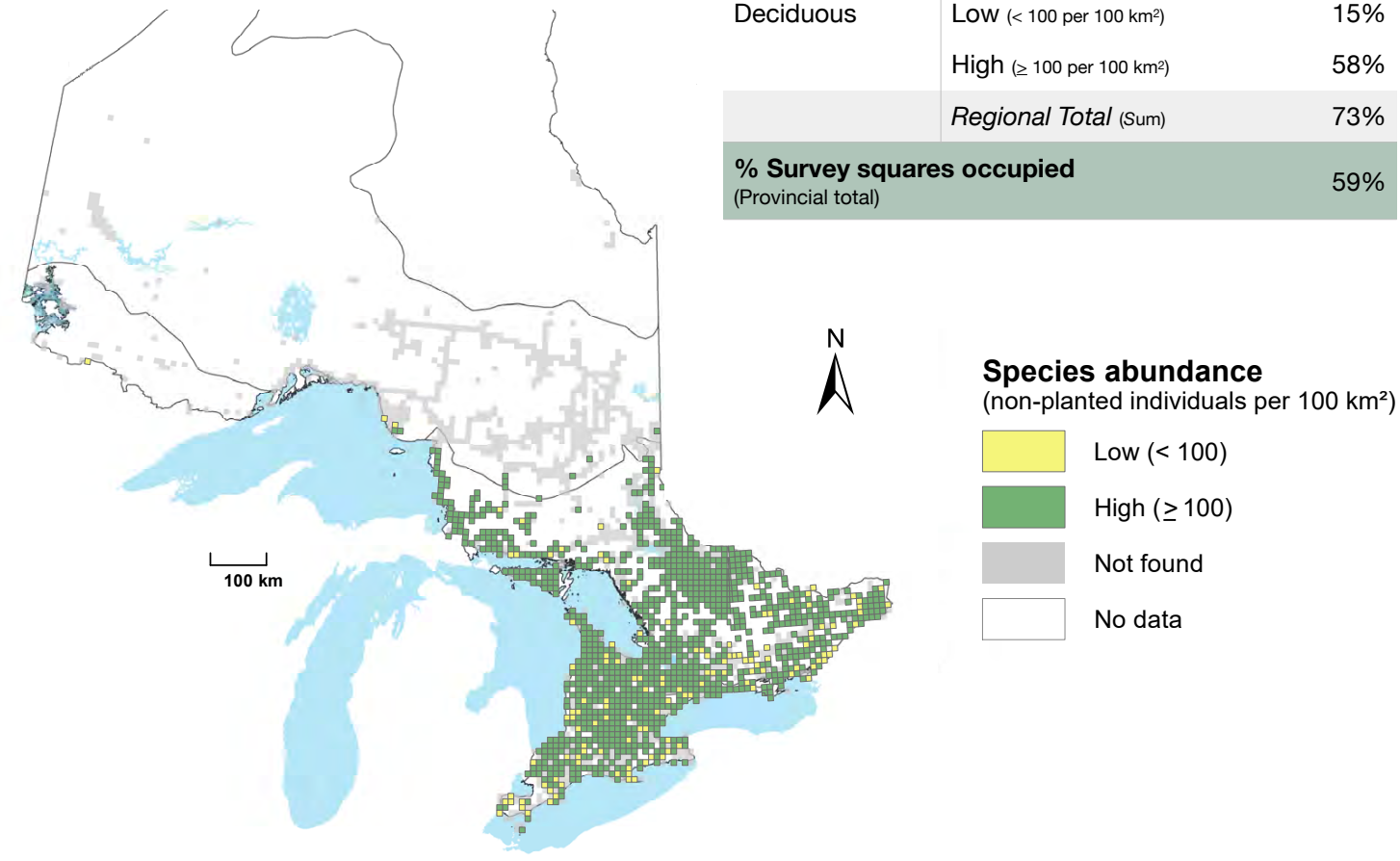
Native to Ontario

Reported distribution: Sugar maple was widely distributed throughout southern and central Ontario where individuals were identified in the vast majority of squares surveyed in the deciduous (73%) and Great Lake - St. Lawrence (80%) forest regions. The species was rarely encountered in northern Ontario and was found in only 2% of squares surveyed in the boreal forest region.

Reported abundance: Within its distribution in southern and central Ontario, sugar maple occurred most commonly at high levels of abundance (≥ 100 individuals per square). The species was infrequently encountered above ~48°N.

Table 23 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

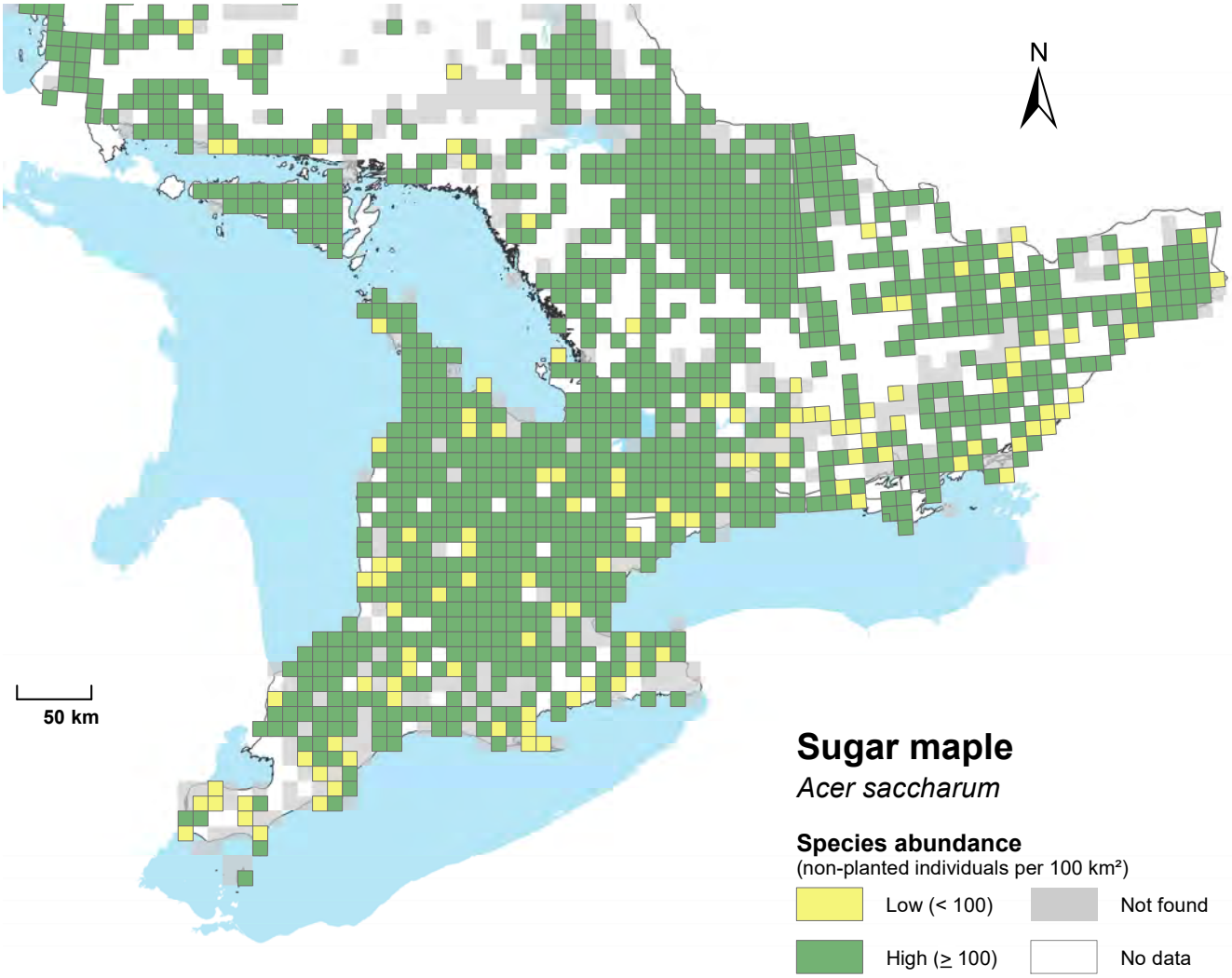
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	2%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	73%
	Regional Total (Sum)	80%
Deciduous	Low (< 100 per 100 km²)	15%
	High (≥ 100 per 100 km²)	58%
	Regional Total (Sum)	73%
% Survey squares occupied (Provincial total)		59%



Sugar maple | Érable à sucre

Acer saccharum

The reported distribution and abundance of sugar maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Mountain maple | Érable à épis

Acer spicatum

Native to Ontario

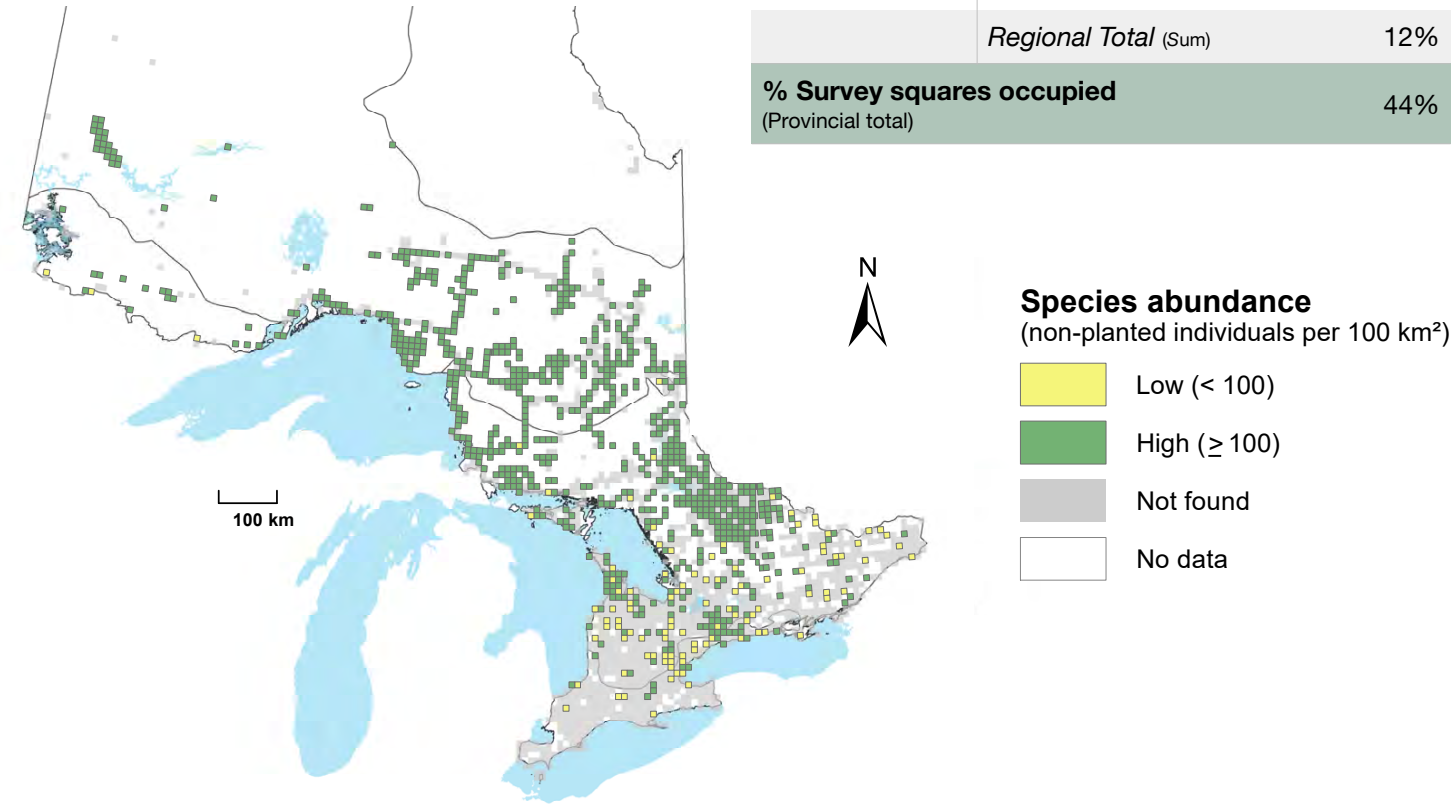
Reported distribution: Mountain maple had a northern distribution in Ontario and was found in 69% of squares surveyed in the boreal forest region. The species was commonly observed in the northern half of the Great Lakes - St. Lawrence forest region, and was more sporadically distributed to the south. Mountain maple was present in only 12% of squares surveyed within the deciduous forest region.

Reported abundance: Mountain maple tended to grow at high abundance (≥ 100 individuals) in the northern portion of its range and was relatively infrequent in southern Ontario.

The northern distribution and abundance of mountain maple may not be fully reflected in the Tree Atlas due to limited survey coverage in the north.

Table 24 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

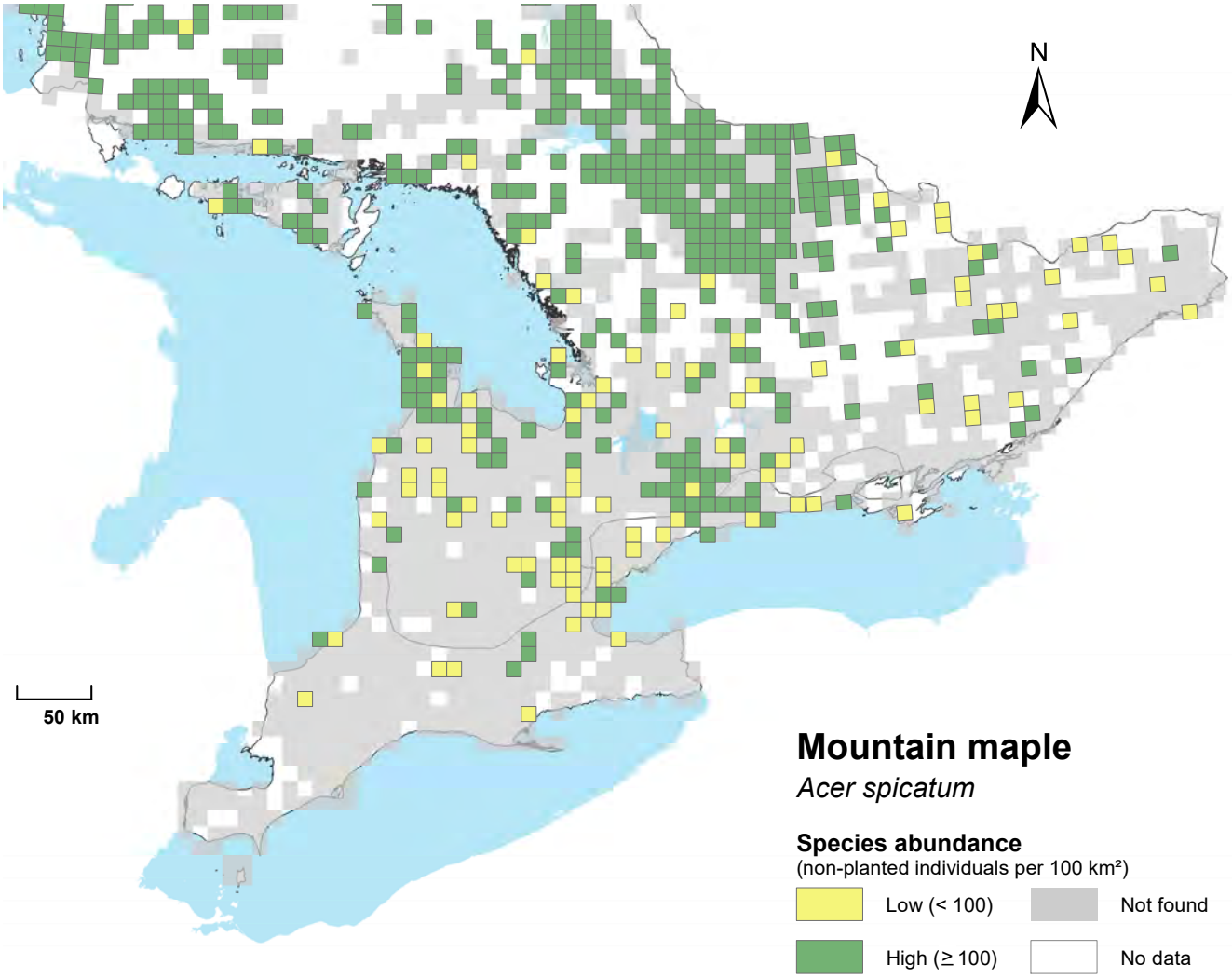
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	68%
	Regional Total (Sum)	69%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	35%
	Regional Total (Sum)	42%
Deciduous	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		44%



Mountain maple | Érable à épis

Acer spicatum

The reported distribution and abundance of mountain maple in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Horse-chestnut | Marronnier d'Inde

Aesculus hippocastanum

Introduced to Ontario

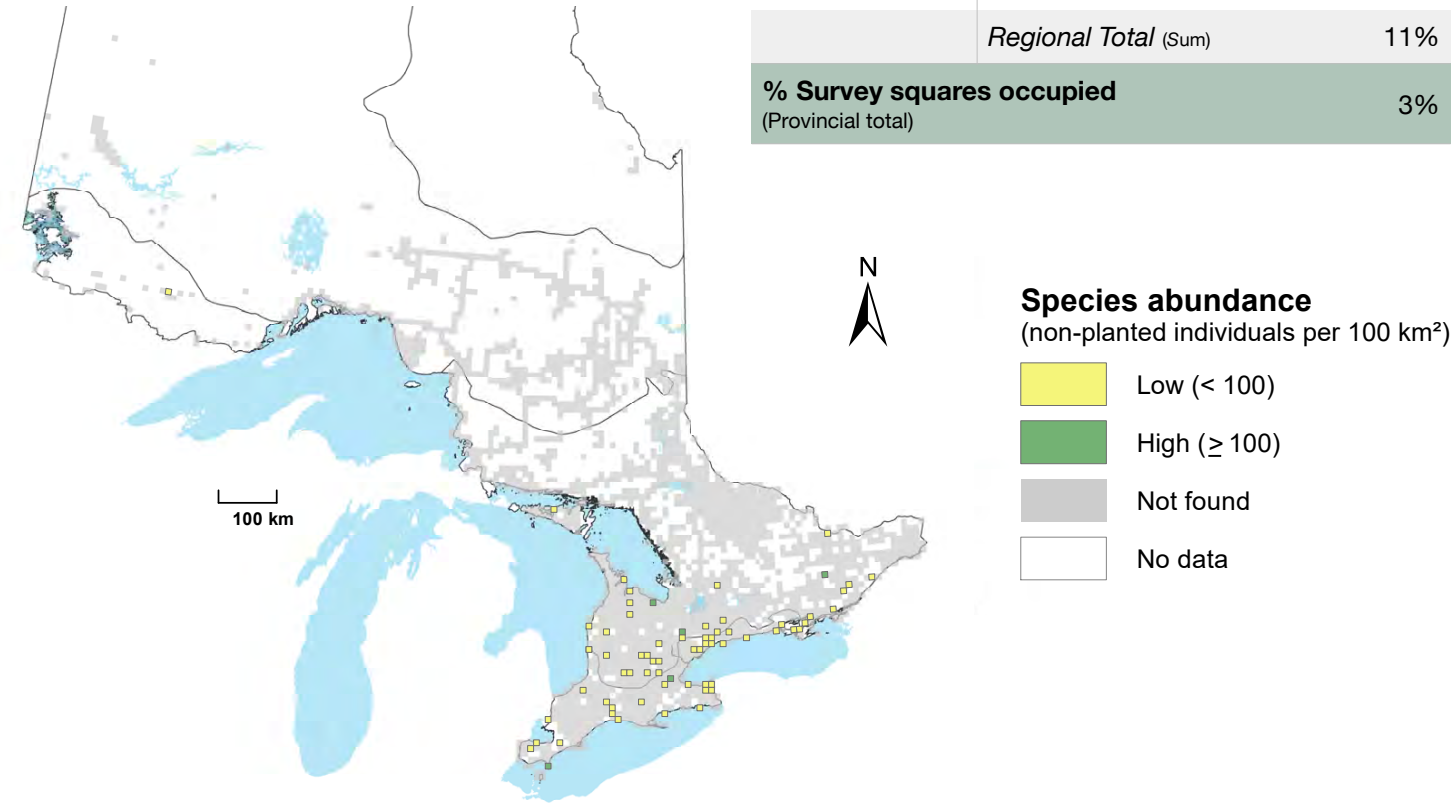
Reported distribution: Horse-chestnut is an introduced species in Ontario and had a relatively limited non-planted distribution. It was found in only 3% of survey squares in the Great Lakes - St. Lawrence forest region, most of which were in southern Ontario, and in 11% of squares in the deciduous forest region. The species' non-planted distribution was centred in areas with large human populations where the species is often planted.

Reported abundance: Non-planted horse-chestnut had a low abundance in Ontario, with only 5 survey squares identified as having ≥ 100 individuals.

The low abundance and limited distribution of non-planted individuals is indicative of the limited ability of horse-chestnuts to naturalize in Ontario.

Table 25 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

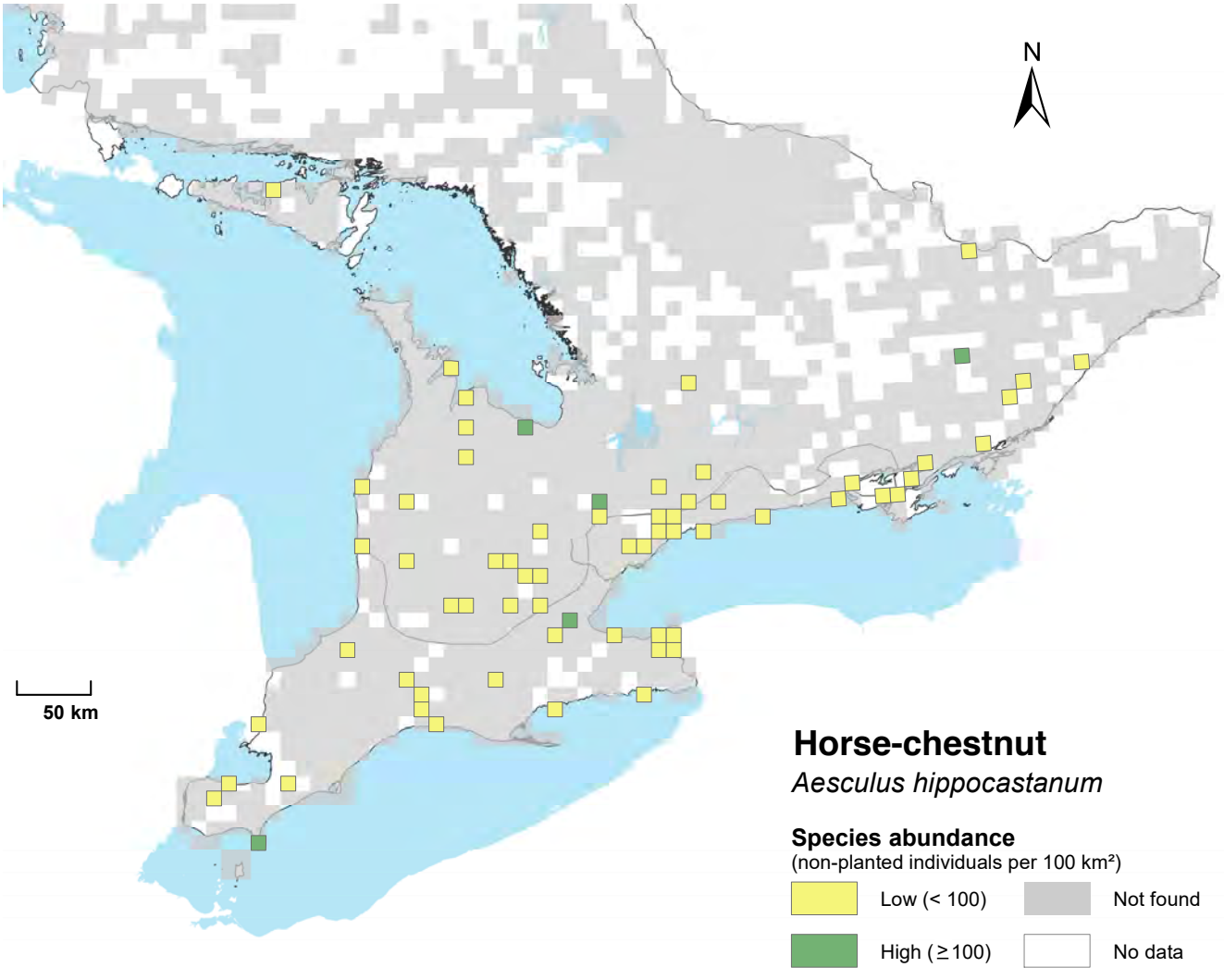
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	11%
% Survey squares occupied (Provincial total)		3%



Horse-chestnut | Marronnier d'Inde

Aesculus hippocastanum

The reported distribution and abundance of horse-chestnut in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Tree-of-heaven | Ailante glanduleux

Ailanthus altissima

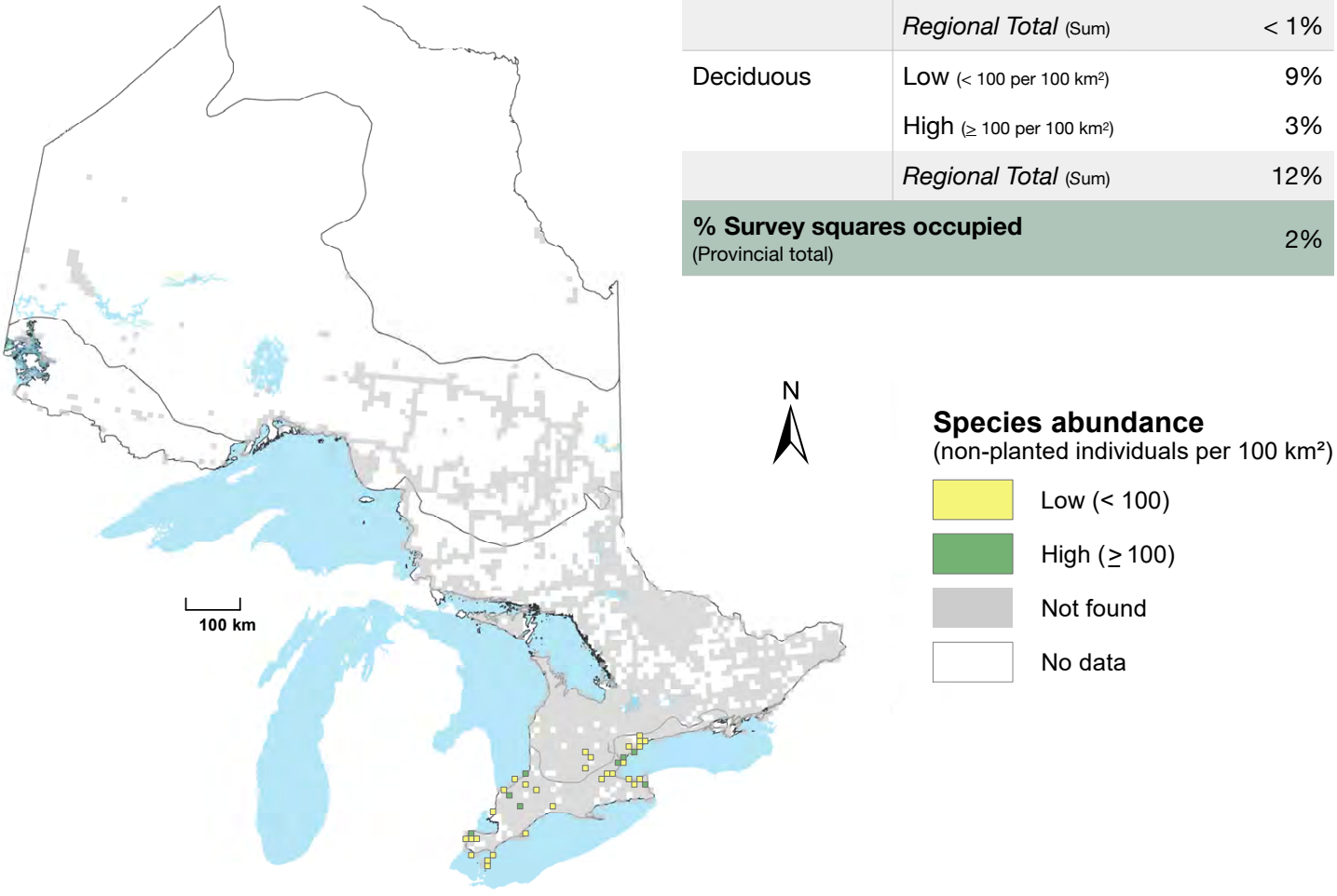
Introduced to Ontario

Reported distribution: Tree-of-heaven is an introduced species in Ontario. The species had a limited non-planted distribution and its provincial range mainly included survey squares located in urban areas in southern Ontario. Tree-of-heaven was observed in < 1% of squares surveyed in the Great Lakes - St. Lawrence forest region and in 12% of squares in the deciduous forest region.

Reported abundance: Tree-of-heaven had a low overall abundance in Ontario but is known to spread readily once initially established.

Table 26 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

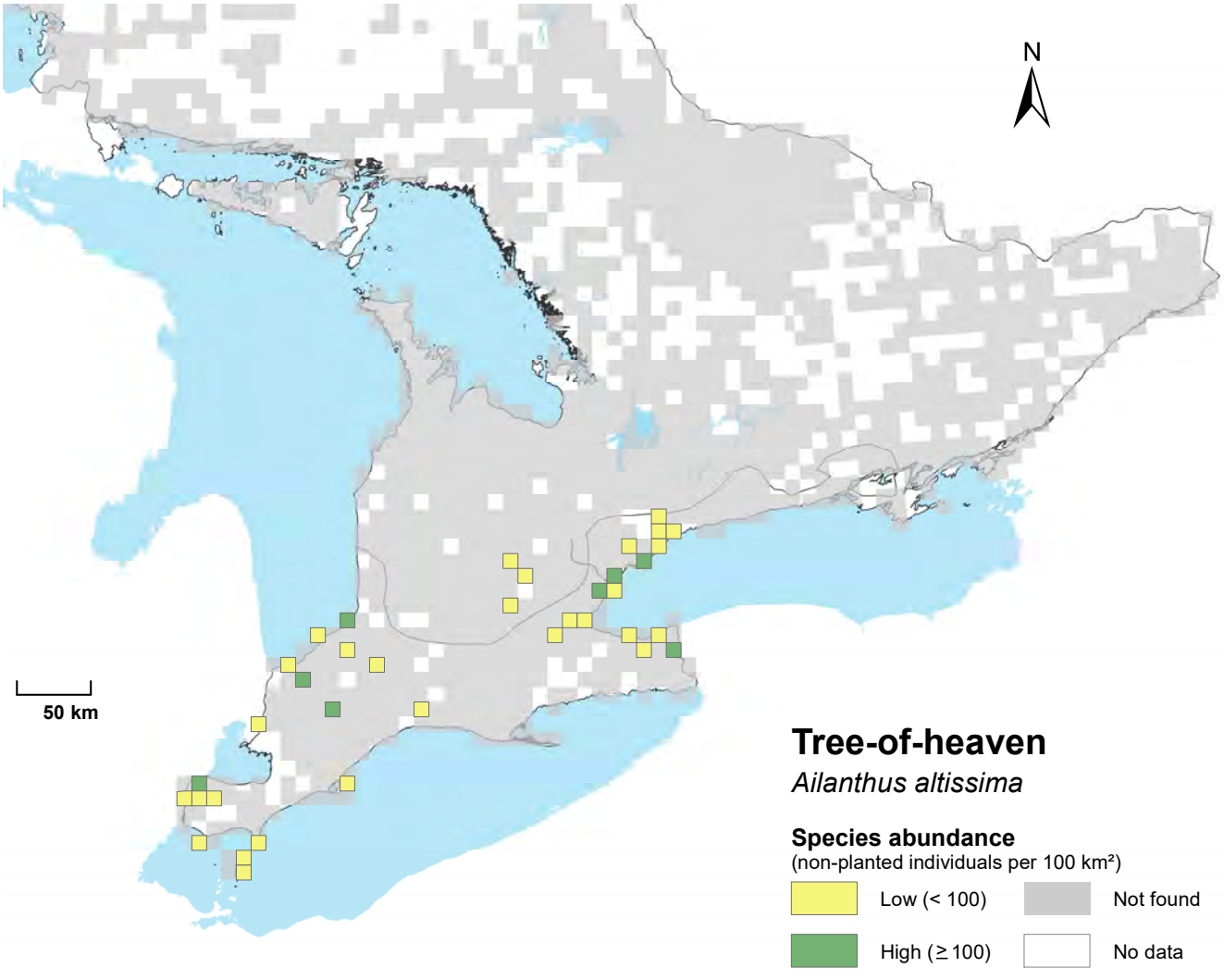
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		2%



Tree-of-heaven | Ailante glanduleux

Ailanthus altissima

The reported distribution and abundance of tree-of-heaven in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

European black alder | Aulne glutineux

Alnus glutinosa

Introduced to Ontario

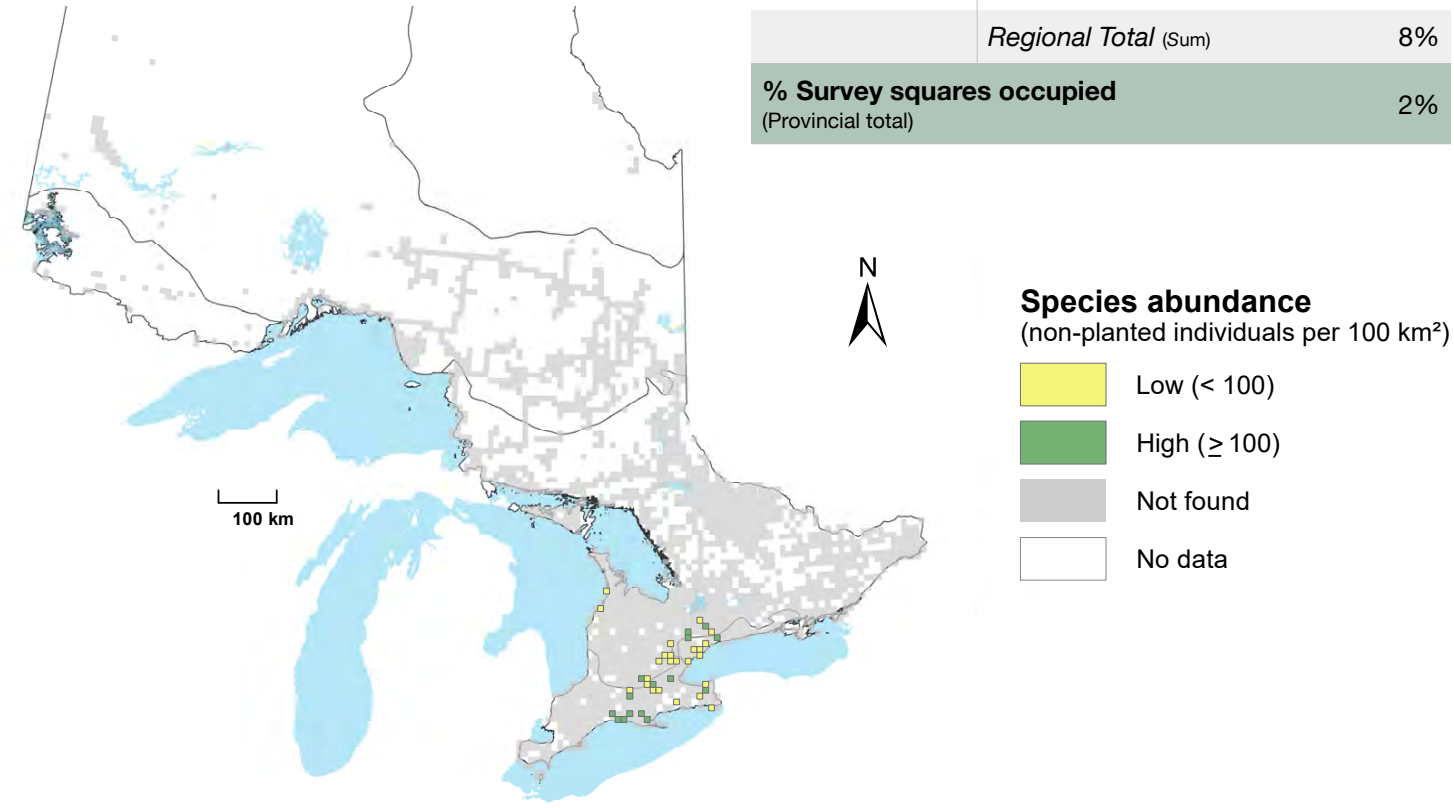
Reported distribution: European black alder is an introduced species in Ontario. The provincial range of non-planted individuals was largely confined to southern Ontario where most alders were found in the Golden Horseshoe region. The species was found in 2% of total survey squares in Ontario.

Reported abundance: Within its distribution in southern Ontario, European black alder had a high abundance in half of the survey squares.

The distribution and abundance of non-planted European black alder in the heavily populated Golden Horseshoe area of Ontario reflects its status as an invasive species in the province.

Table 27 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

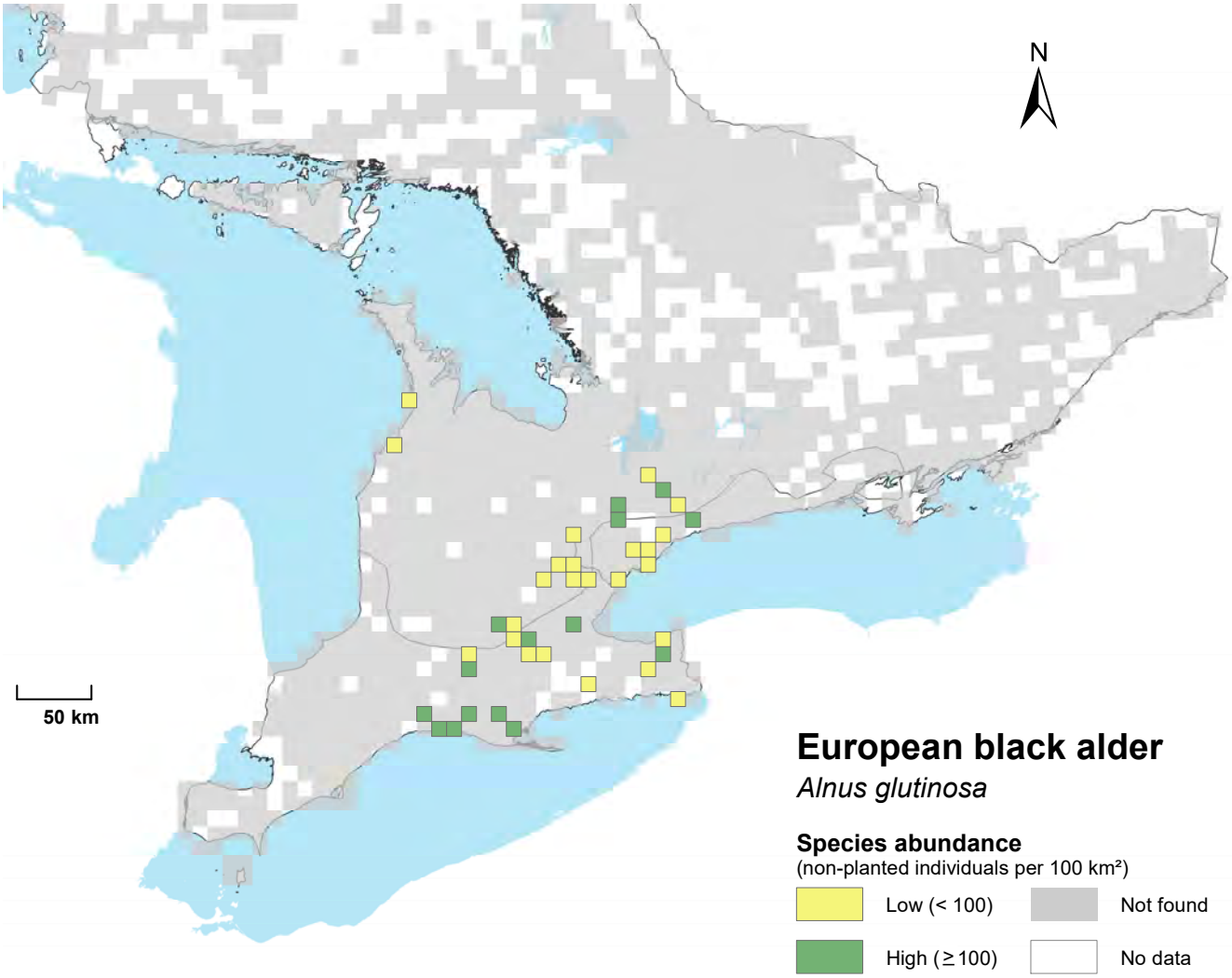
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	8%
% Survey squares occupied (Provincial total)		2%



European black alder | Aulne glutineux

Alnus glutinosa

The reported distribution and abundance of European black alder in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Speckled alder | Aulne rugueux

Alnus incana subsp. *rugosa*

Native to Ontario

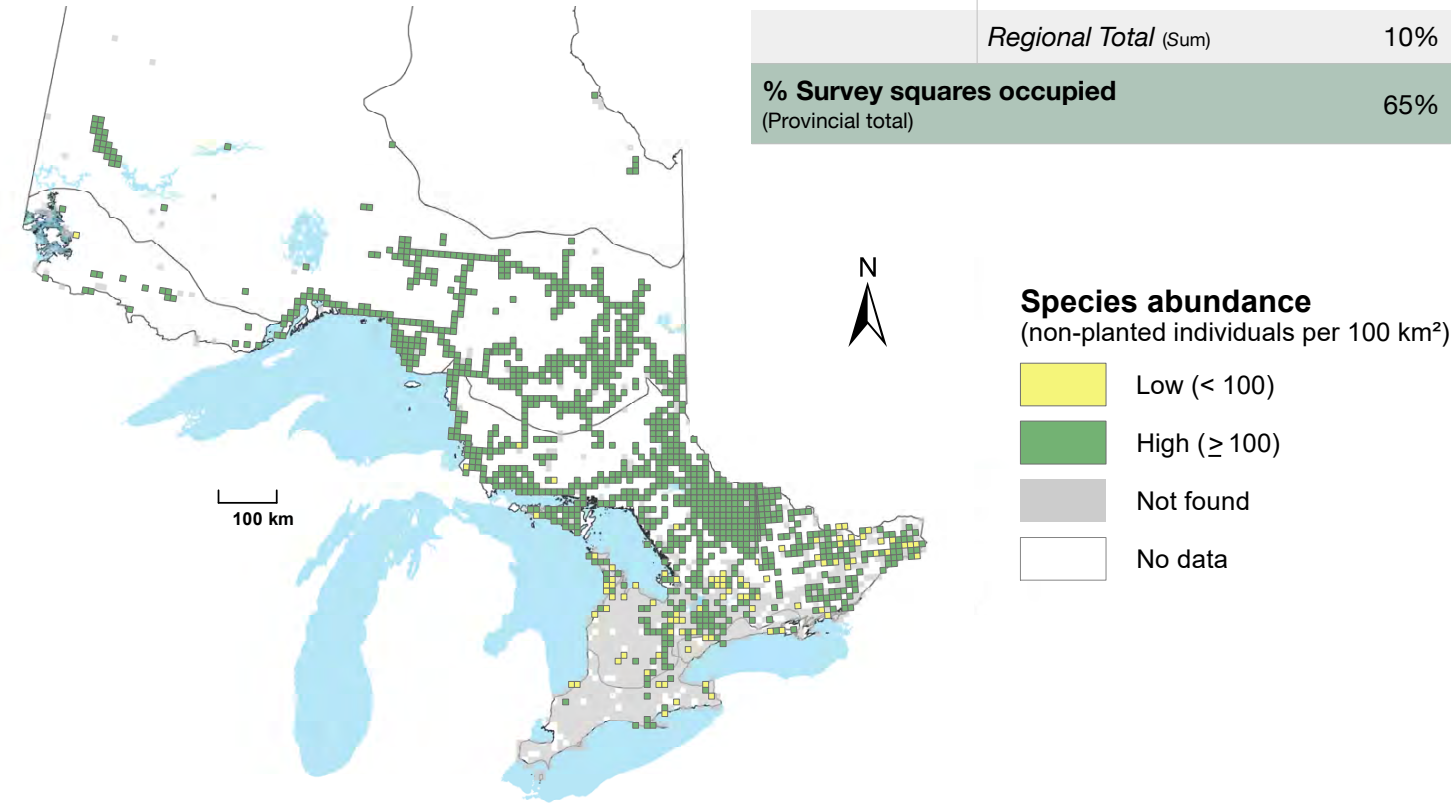
Reported distribution: Speckled alder had a widespread distribution in central and northern Ontario but was largely absent from the southwest of the province. The species was identified in 96% of squares surveyed in the boreal forest region, in 66% of squares in the Great Lakes-St. Lawrence, and in only 10% of squares in the deciduous forest region.

Reported abundance: Speckled alders were typically found growing at a high abundance; the vast majority of squares in which they were identified had ≥ 100 individuals.

The northern distribution and abundance of speckled alder may not be fully reflected in the Tree Atlas due to limited survey coverage in the north.

Table 28 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

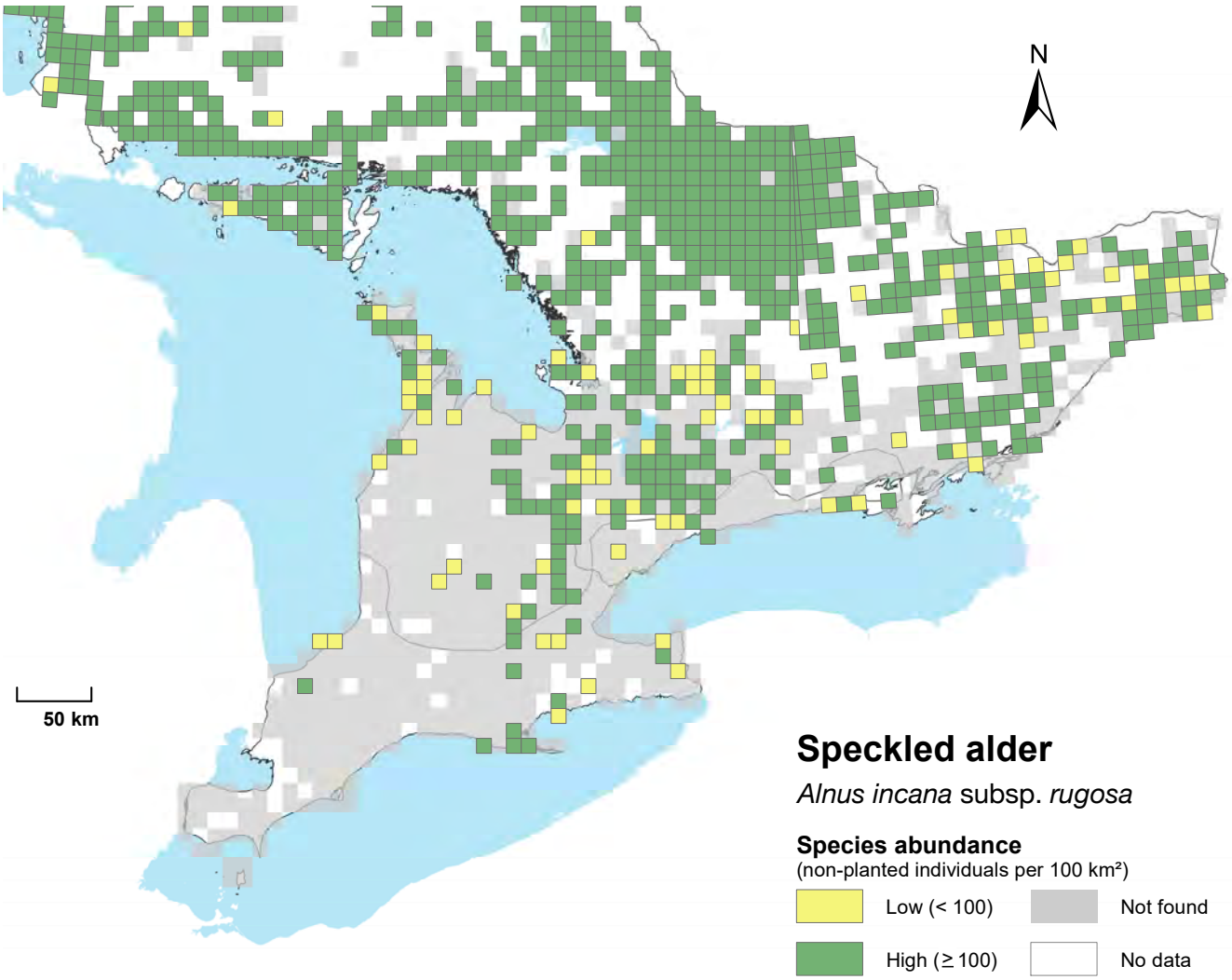
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	96%
	Regional Total (Sum)	96%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	60%
	Regional Total (Sum)	66%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	10%
% Survey squares occupied (Provincial total)		65%



Speckled alder | Aulne rugueux

Alnus incana subsp. *rugosa*

The reported distribution and abundance of speckled alder in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Serviceberries | Amélanchiers

Amelanchier spp.

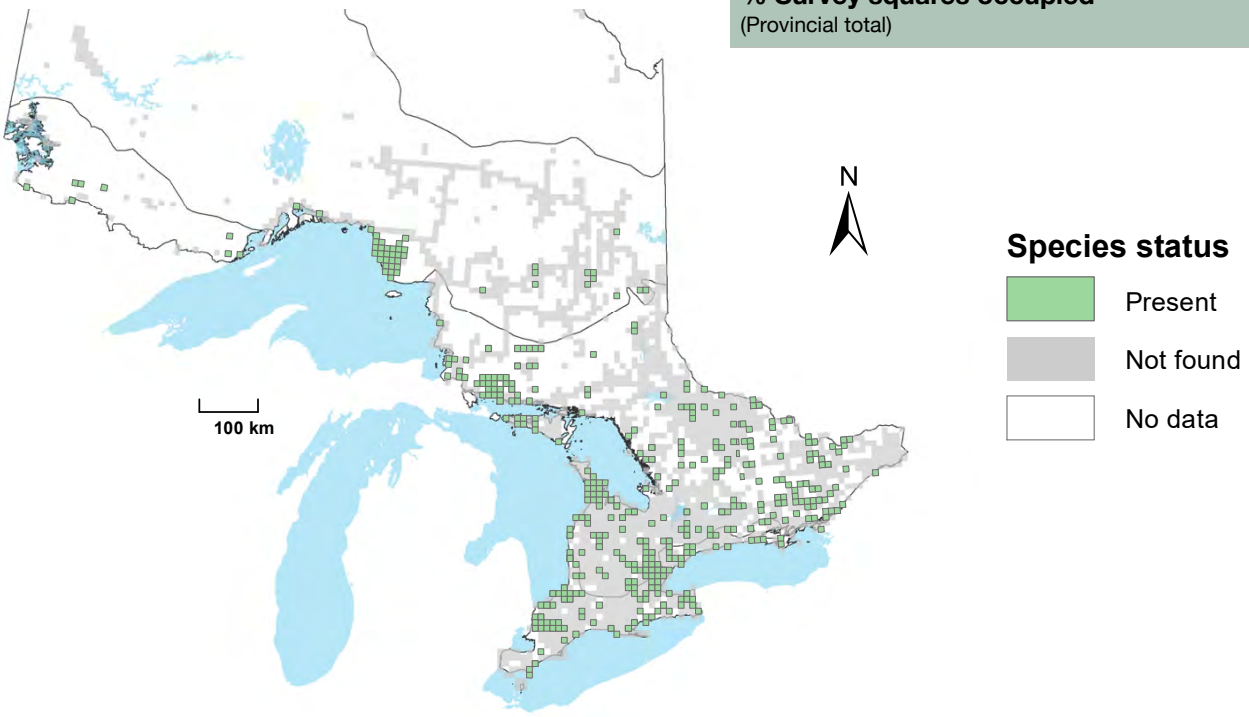
Native to Ontario

Reported distribution: Original Tree Atlas surveys collected separate reports for the two main tree-sized species of serviceberry in Ontario; downy serviceberry (*A. arborea*) and smooth serviceberry (*A. laevis*). As these species can only be reliably distinguished when in flower, it was later decided to display reports for these species together (surveys occurred year-round). Notably, intermediate serviceberry (*A. intermedia)*, which can also achieve small tree size, is easily confused with either downy serviceberry or smooth serviceberry during much of the growing season. Despite these limitations, we feel the accompanying map provides a fairly comprehensive view of the broad range of tree-sized serviceberries in Ontario.

Reported abundance: Tree-sized serviceberries generally had a low to moderate abundance in Ontario with < 100 individuals in most survey squares.

Table 29 The reported distribution of non-planted individuals in each forest region, and across the province. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

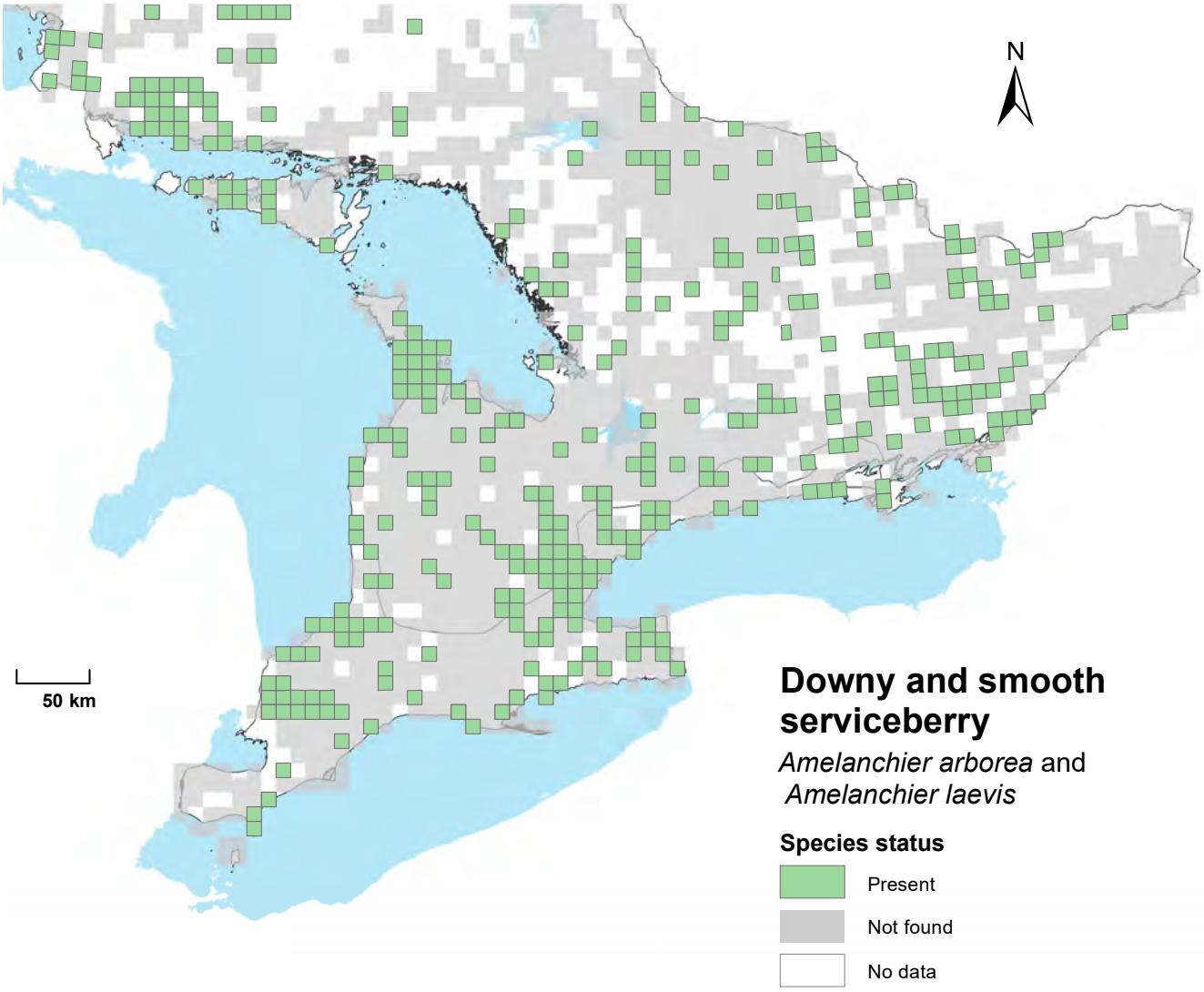
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	*NA*
	High (≥ 100 per 100 km²)	*NA*
	Regional Total	9%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	*NA*
	High (≥ 100 per 100 km²)	*NA*
	Regional Total	22%
Deciduous	Low (< 100 per 100 km²)	*NA*
	High (≥ 100 per 100 km²)	*NA*
	Regional Total	30%
% Survey squares occupied (Provincial total)		20%



Serviceberries | Amélanchiers

Amelanchier spp.

The reported distribution of downy and smooth serviceberries in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Pawpaw | Asiminier trilobé

Asimina triloba

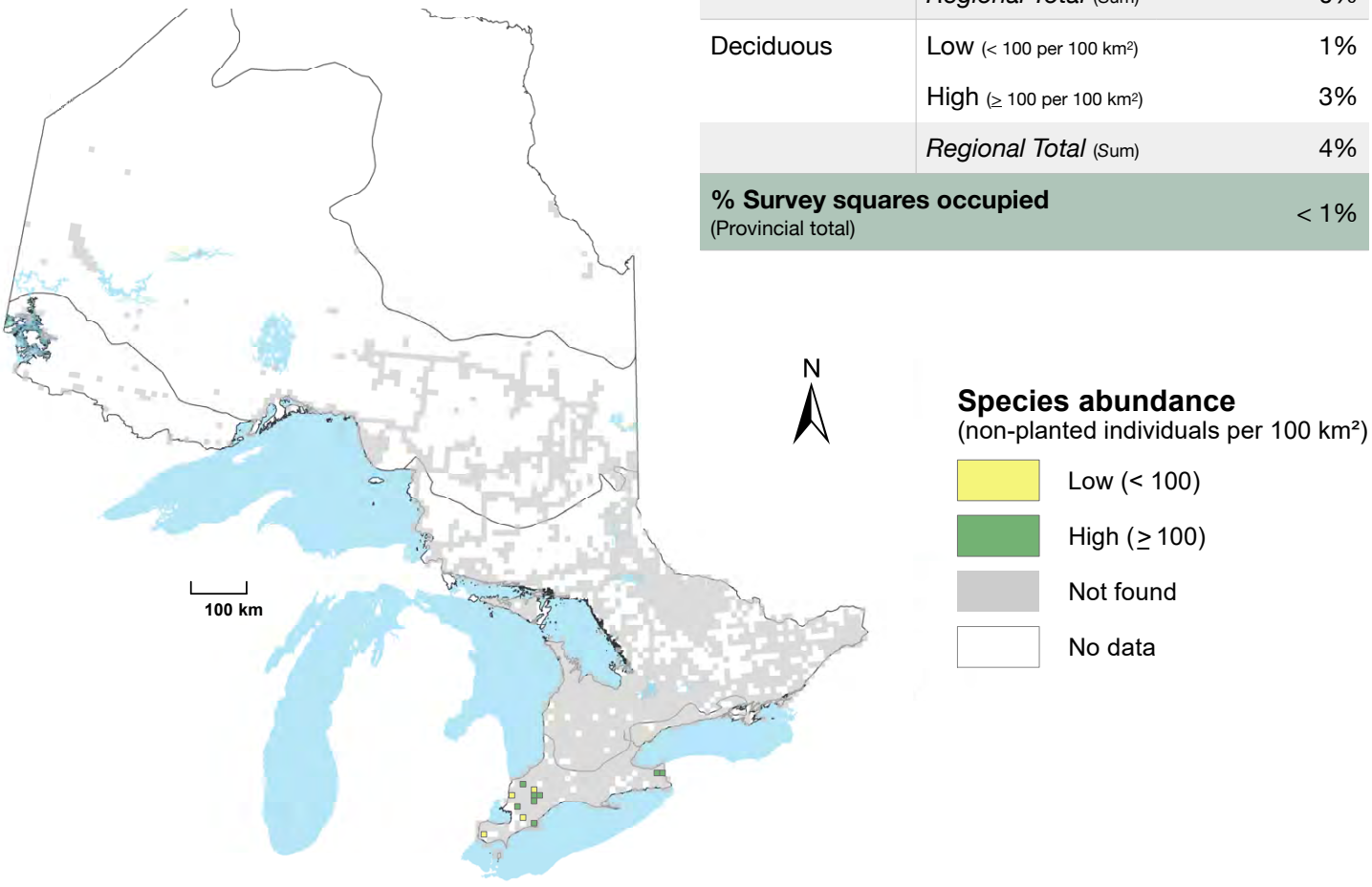
Native to Ontario

Reported distribution: Pawpaw had a very limited distribution in Ontario where its range was confined to the southwest of the province. The species was found in only 12 (4%) surveyed squares in the deciduous forest region. The species was identified in two main clusters: one in the southwest of the province, and another near the Niagara peninsula.

Reported abundance: Pawpaw had a low abundance at the provincial level as the species occupied < 1% of surveyed squares. Pawpaws were, however, found growing at high abundance (≥ 100 individuals) in half of the survey squares in which they were identified.

Table 30 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

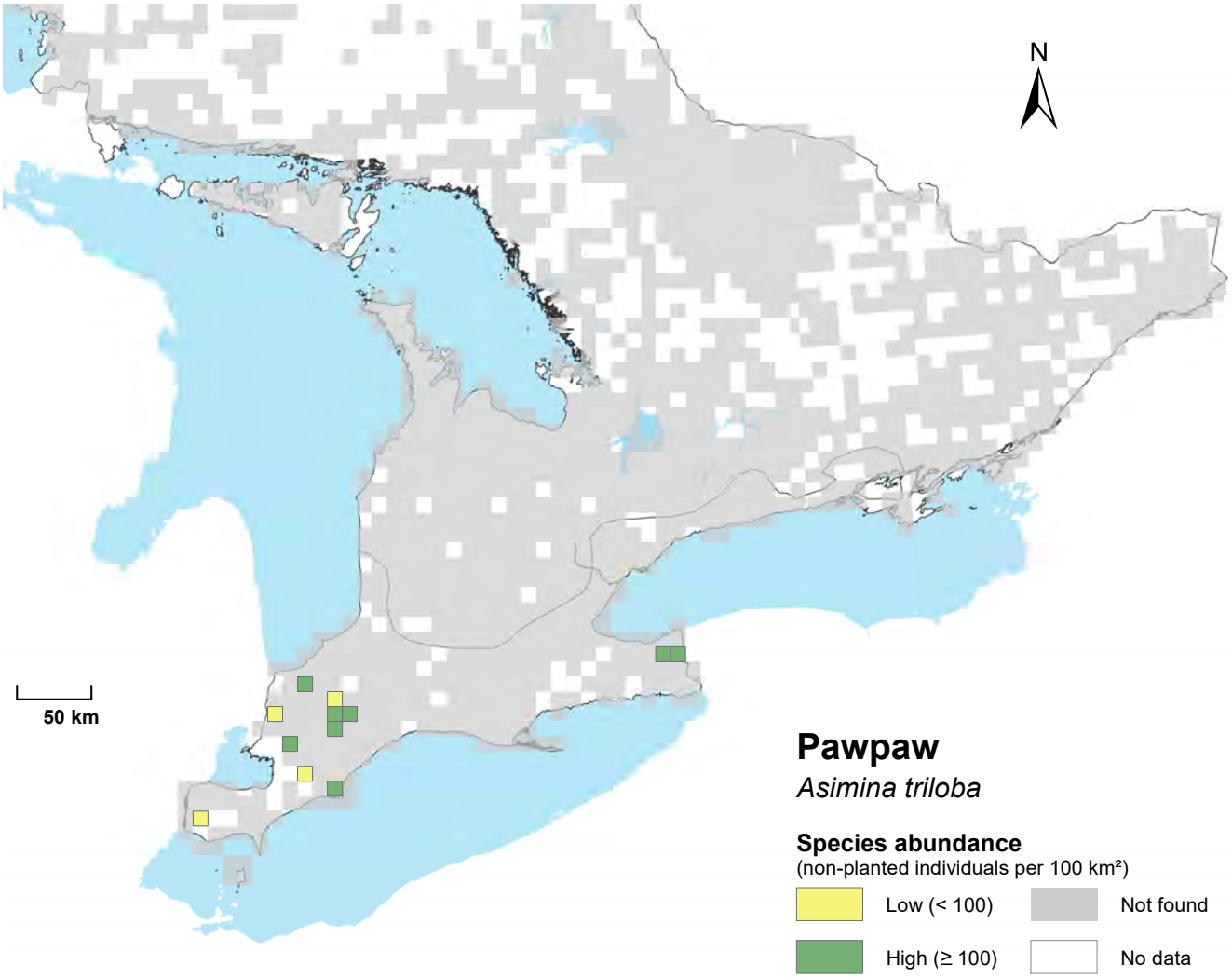
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	4%
% Survey squares occupied (Provincial total)		< 1%



Pawpaw | Asiminier trilobé

Asimina triloba

The reported distribution and abundance of pawpaw in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Yellow birch | Bouleau jaune

Betula alleghaniensis

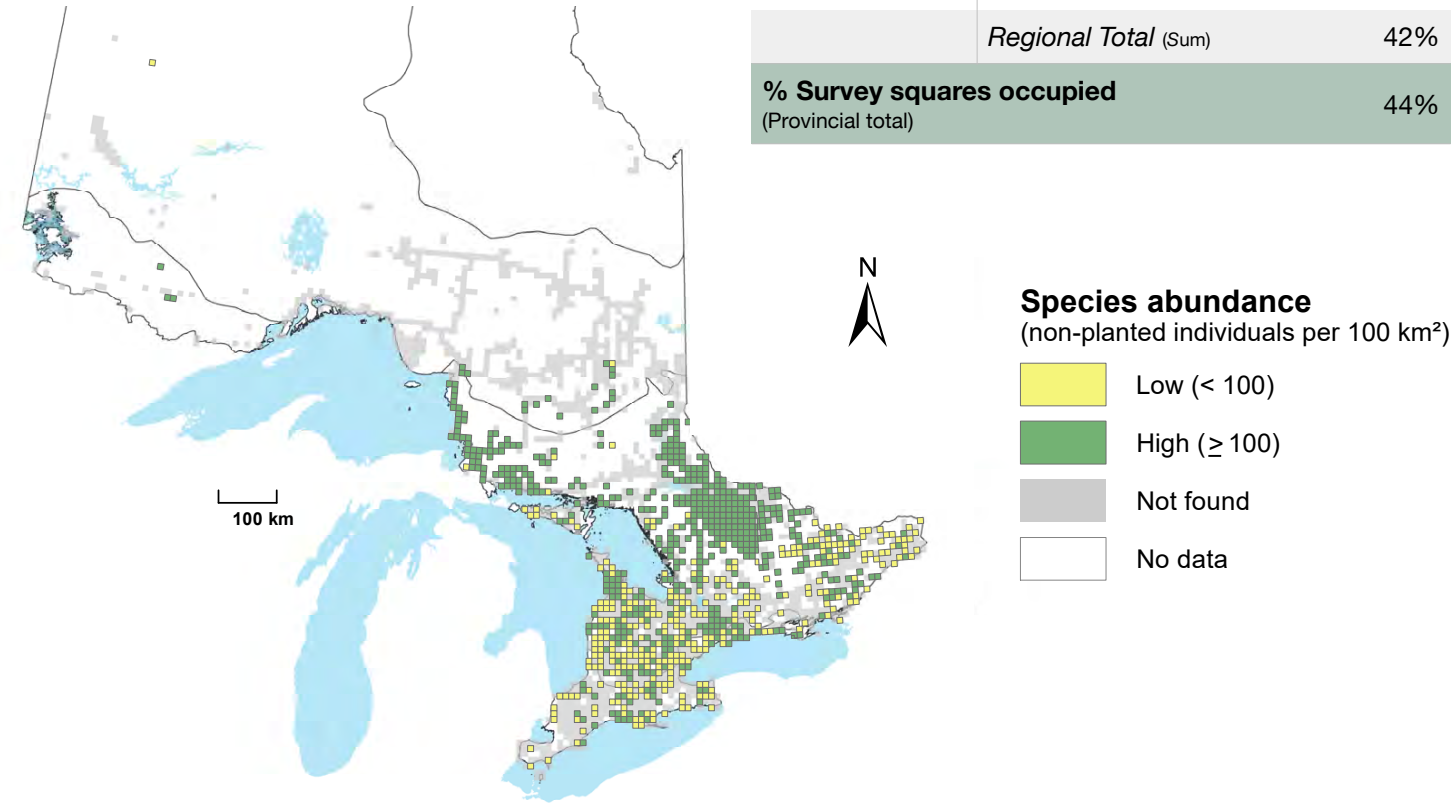
Native to Ontario

Reported distribution: Yellow birch was relatively widespread throughout the southern half of the province. Its main distribution was in the Great Lakes - St. Lawrence forest region, but the species was also found in numerous survey squares in the northeast section of the deciduous forest region. Yellow birch was only identified in 17 (3%) of the squares surveyed in the boreal region.

Reported abundance: Yellow birch increased in abundance with latitude within its range. In the south of the province the species tended to occur at low abundance (< 100 individuals) whereas it occurred more commonly at high abundance (≥ 100 individuals) in central Ontario.

Table 31 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

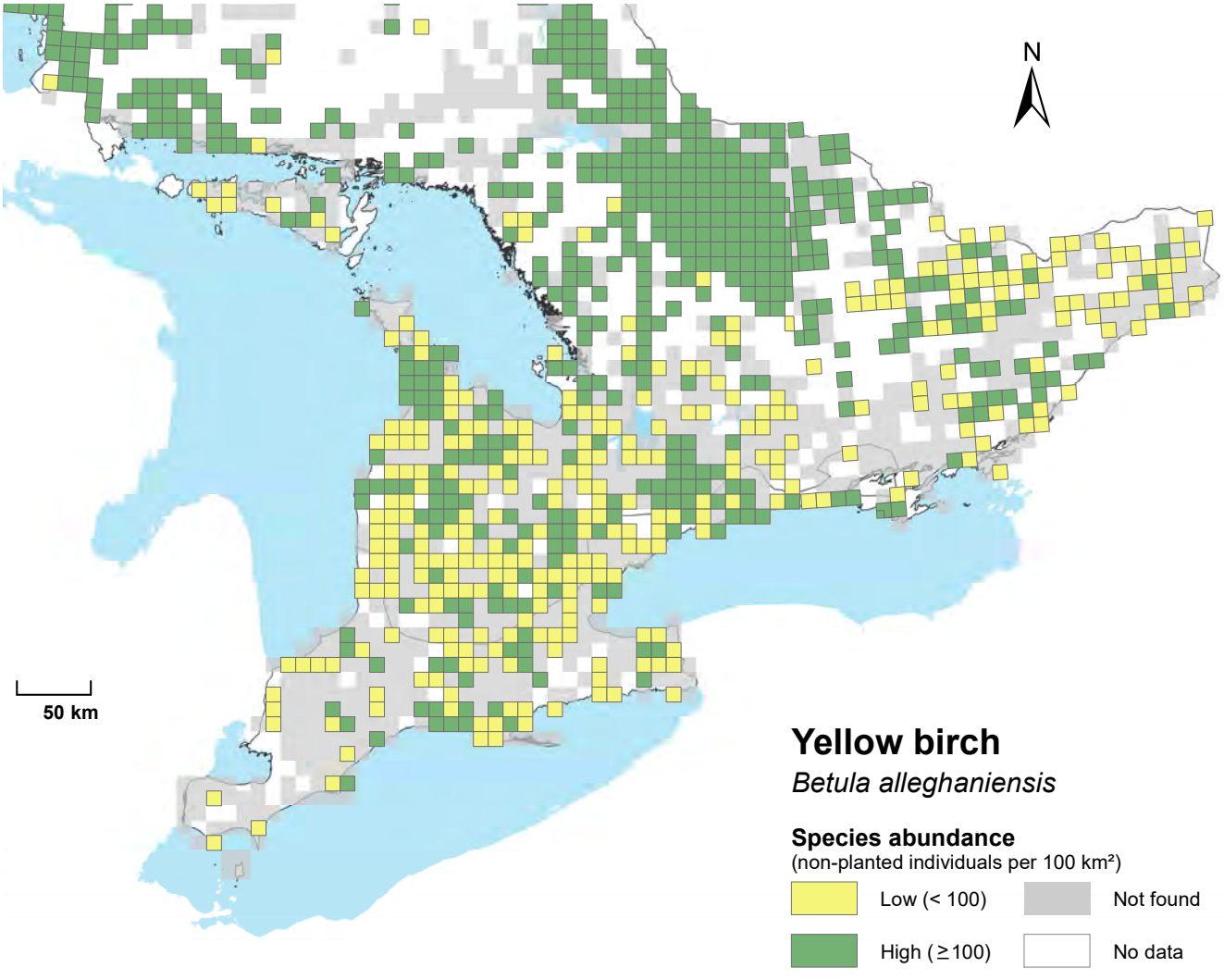
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	3%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	19%
	High (≥ 100 per 100 km²)	41%
	Regional Total (Sum)	60%
Deciduous	Low (< 100 per 100 km²)	27%
	High (≥ 100 per 100 km²)	15%
	Regional Total (Sum)	42%
% Survey squares occupied (Provincial total)		44%



Yellow birch | Bouleau jaune

Betula alleghaniensis

The reported distribution and abundance of yellow birch in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Paper birch | Bouleau à papier

Betula papyrifera

Native to Ontario

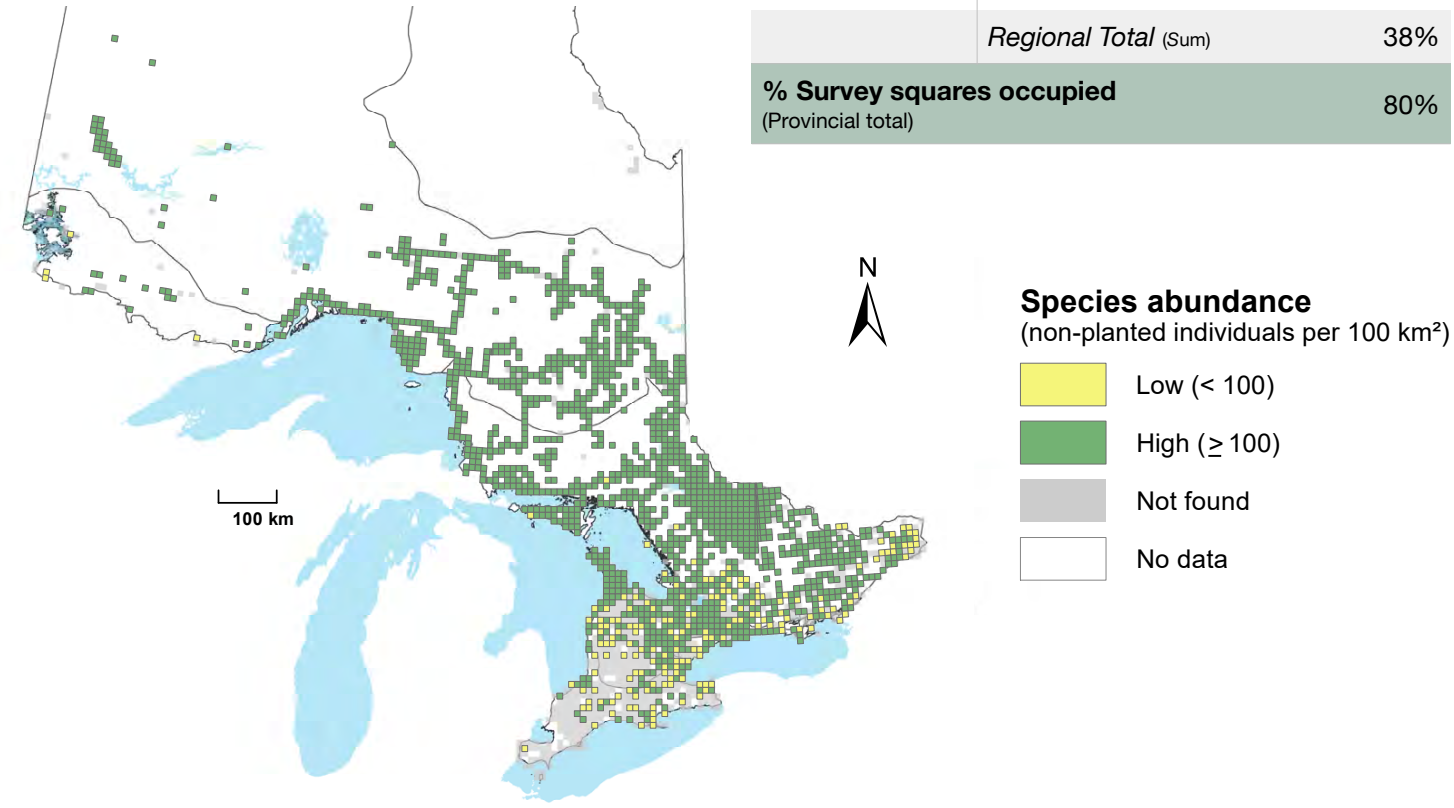
Reported distribution: Paper birch had a widespread distribution throughout Ontario. The species was identified in the vast majority of surveyed squares (80%); however, it was infrequently encountered in survey squares in southwestern Ontario.

Reported abundance: Paper birch was commonly observed in Tree Atlas survey squares. The species transitioned from low to high abundance in the southwest of the province, and was found growing at high abundance in most of the squares in which it was identified.

The northern distribution and abundance of paper birch may not be fully reflected in the Tree Atlas due to limited survey coverage in the north.

Table 32 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

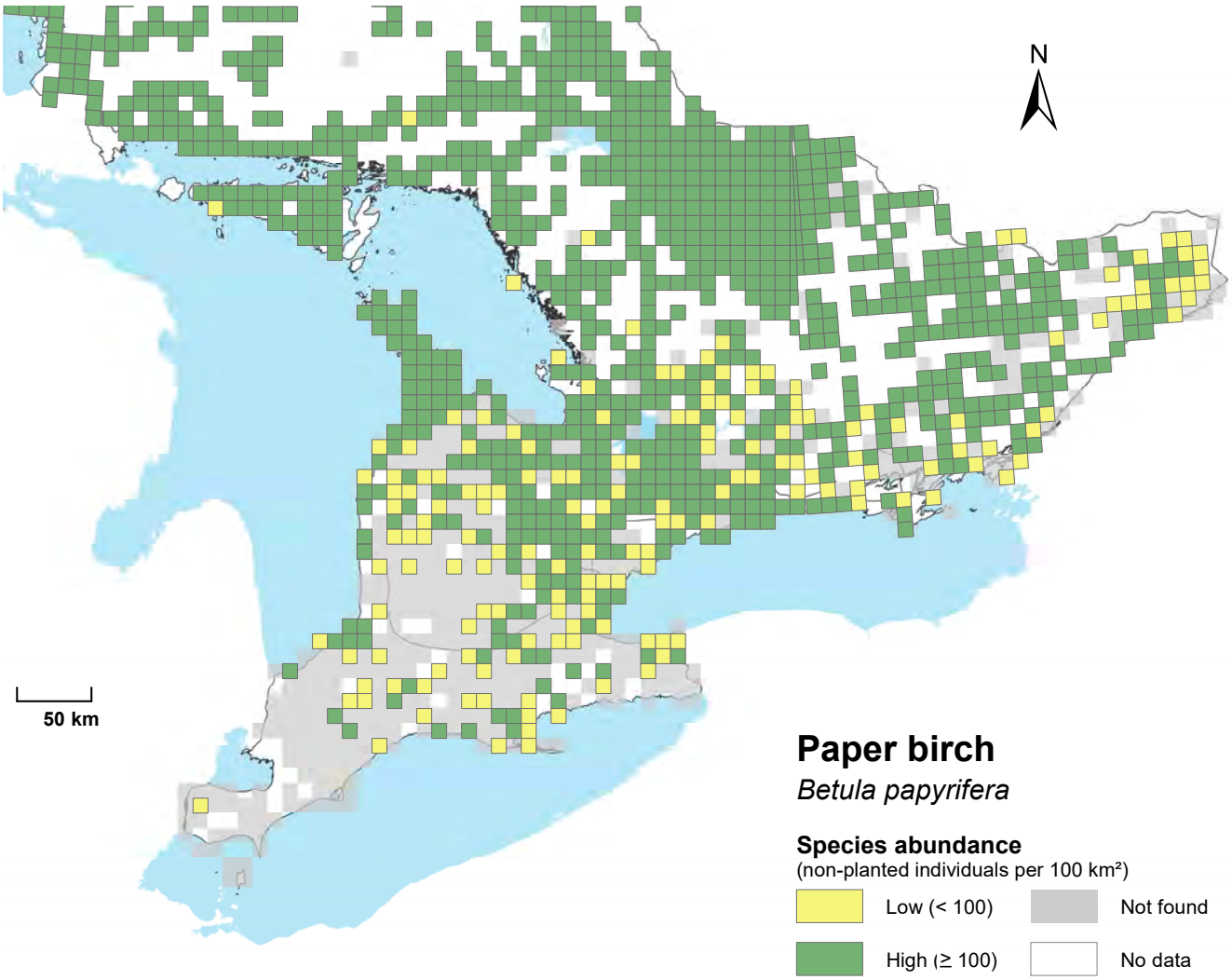
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	95%
	Regional Total (Sum)	95%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	75%
	Regional Total (Sum)	85%
Deciduous	Low (< 100 per 100 km²)	18%
	High (≥ 100 per 100 km²)	20%
	Regional Total (Sum)	38%
% Survey squares occupied (Provincial total)		80%



Paper birch | Bouleau à papier

Betula papyrifera

The reported distribution and abundance of paper birch in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

European white birch | Bouleau verruqueux

Betula pendula

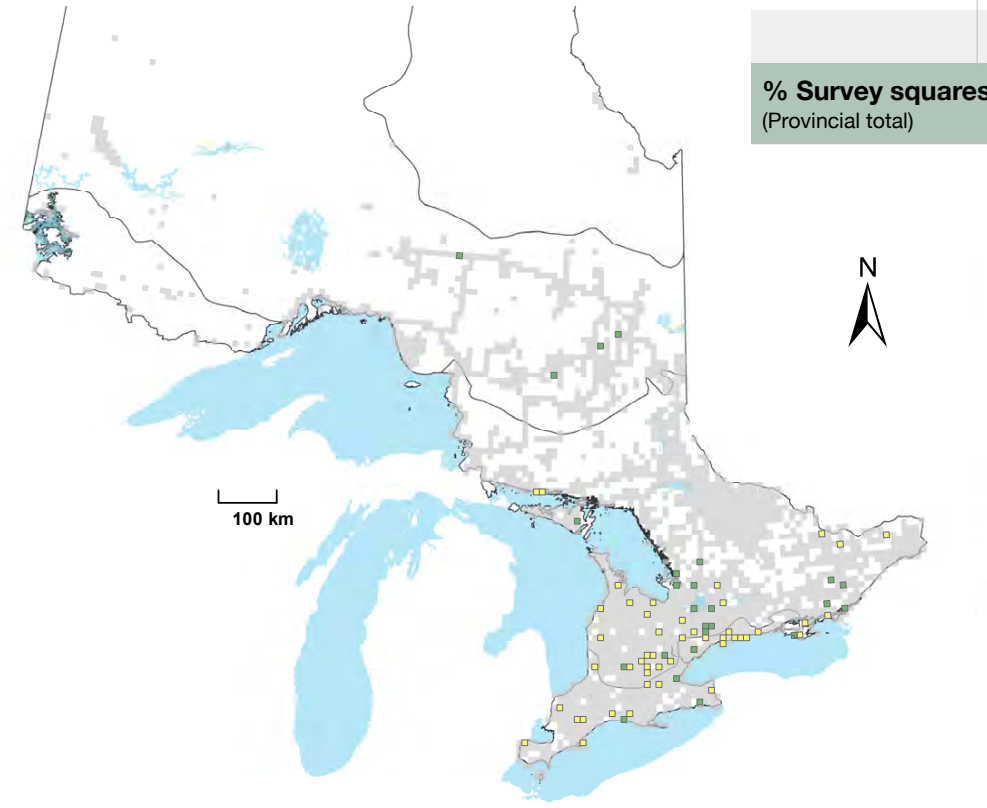
Introduced to Ontario

Reported distribution: European white birch is an introduced species in Ontario that was found to have relatively limited naturalized range in the province. Its distribution was discontinuous throughout southern Ontario; however, European white birch was also identified in an isolated area in the northern Great Lakes - St. Lawrence forest region.

Reported abundance: Within its non-planted range, European white birch tended to occur at low abundance (< 100 individuals). However, the species was found at high abundance in about a third of the survey squares in which it was identified (26 squares total). The distribution and abundance of non-planted weeping birch in heavily populated areas indicates its ability to naturalize in Ontario.

Table 33 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

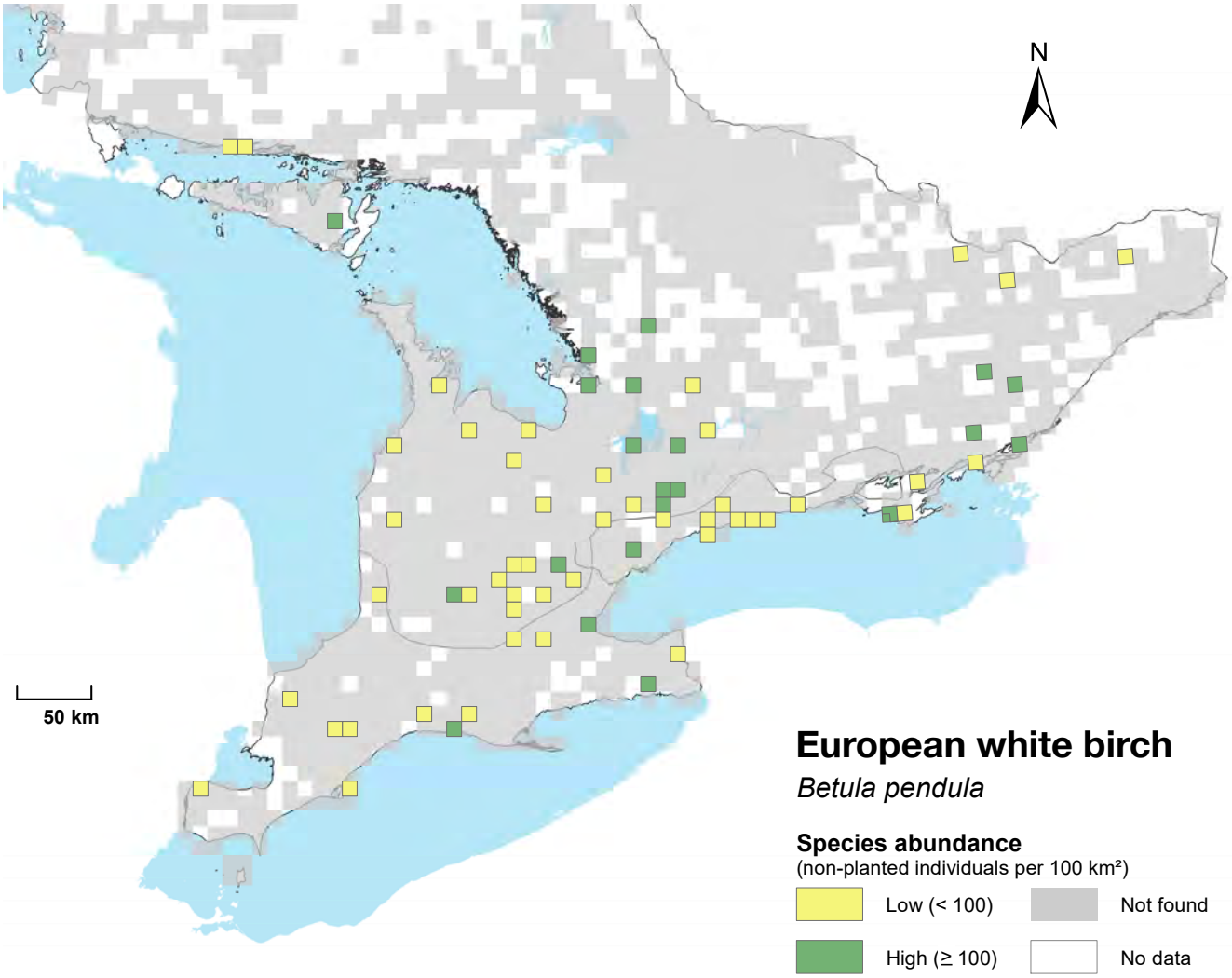
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	4%
Deciduous	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	8%
% Survey squares occupied (Provincial total)		4%



European white birch | Bouleau verruqueux

Betula pendula

The reported distribution and abundance of European white birch in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Grey birch | Bouleau gris

Betula populifolia

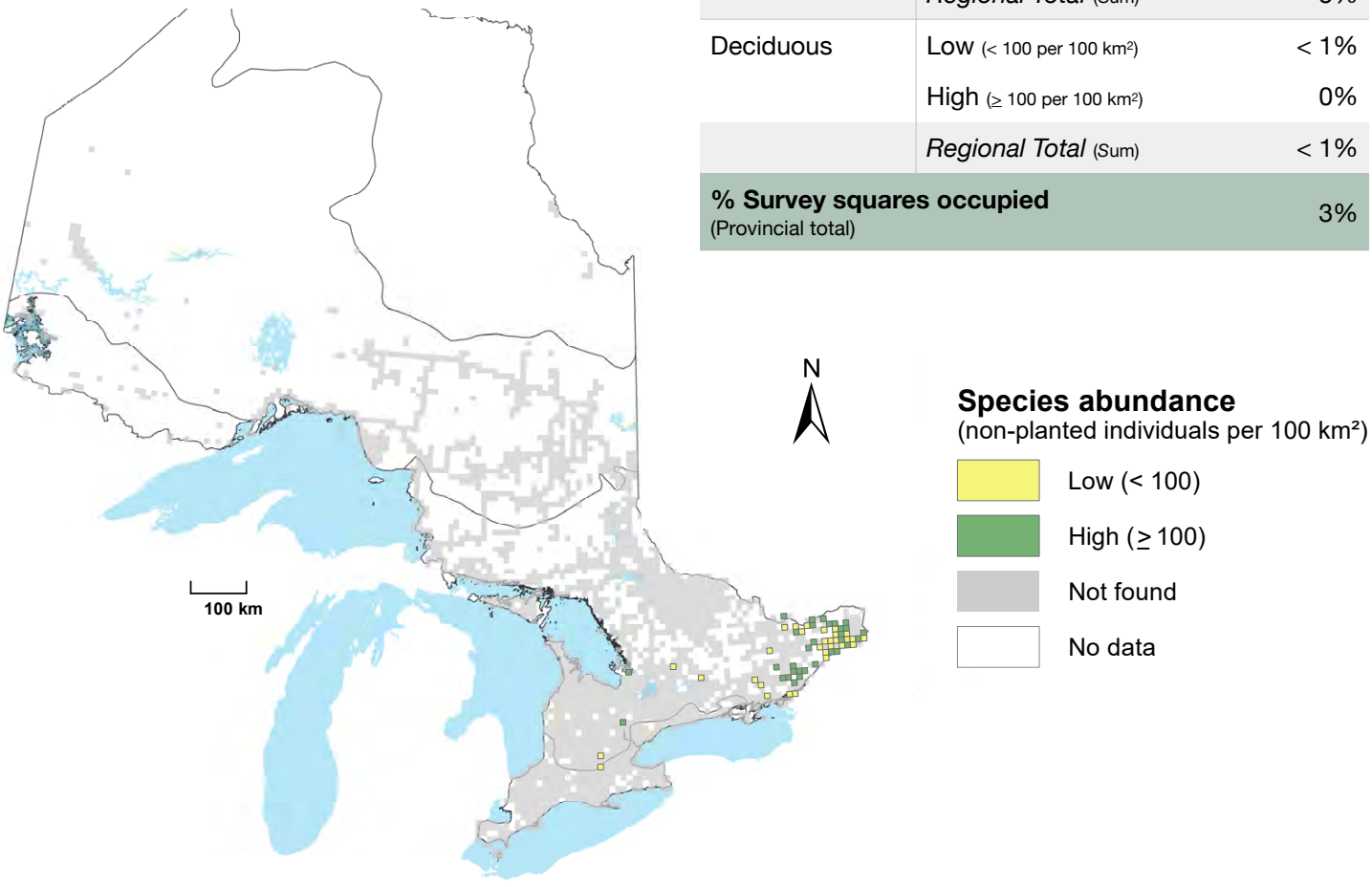
Native to Ontario

Reported distribution: Grey birch had a limited range in Ontario, and all but one survey square in which the species was found was located within the Great Lakes - St. Lawrence forest region. The species was primarily identified in eastern Ontario and was limited to isolated survey squares in the remainder of southern Ontario, which represents the western edge of the species' range in North America.

Reported abundance: Grey birch had a low overall abundance in Ontario owing to its limited distribution. Within its range, the species occurred equally at low and high abundance.

Table 34 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

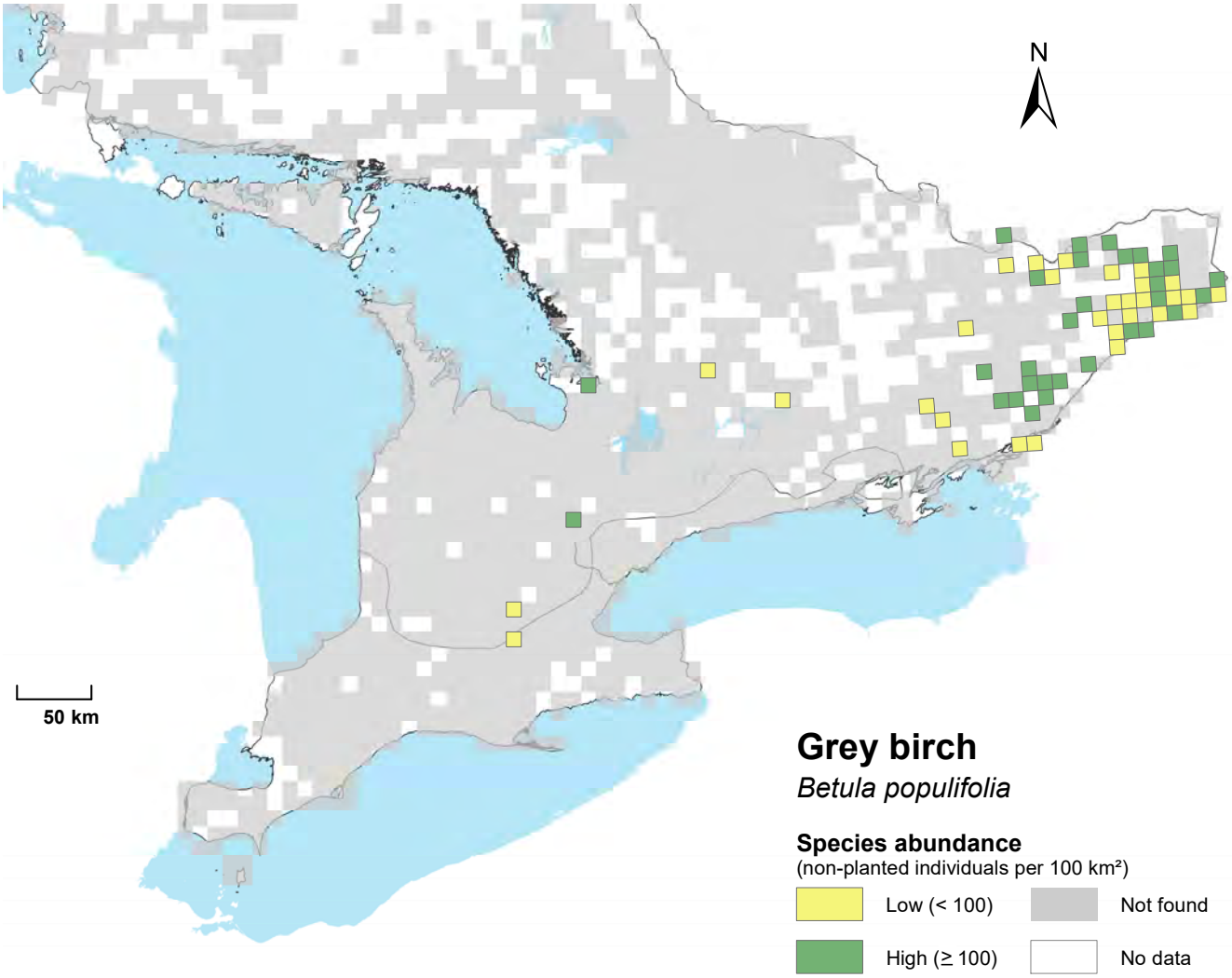
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	5%
Deciduous	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
% Survey squares occupied (Provincial total)		3%



Grey birch | Bouleau gris

Betula populifolia

The reported distribution and abundance of grey birch in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Blue-beech | Charme de Caroline

Carpinus caroliniana

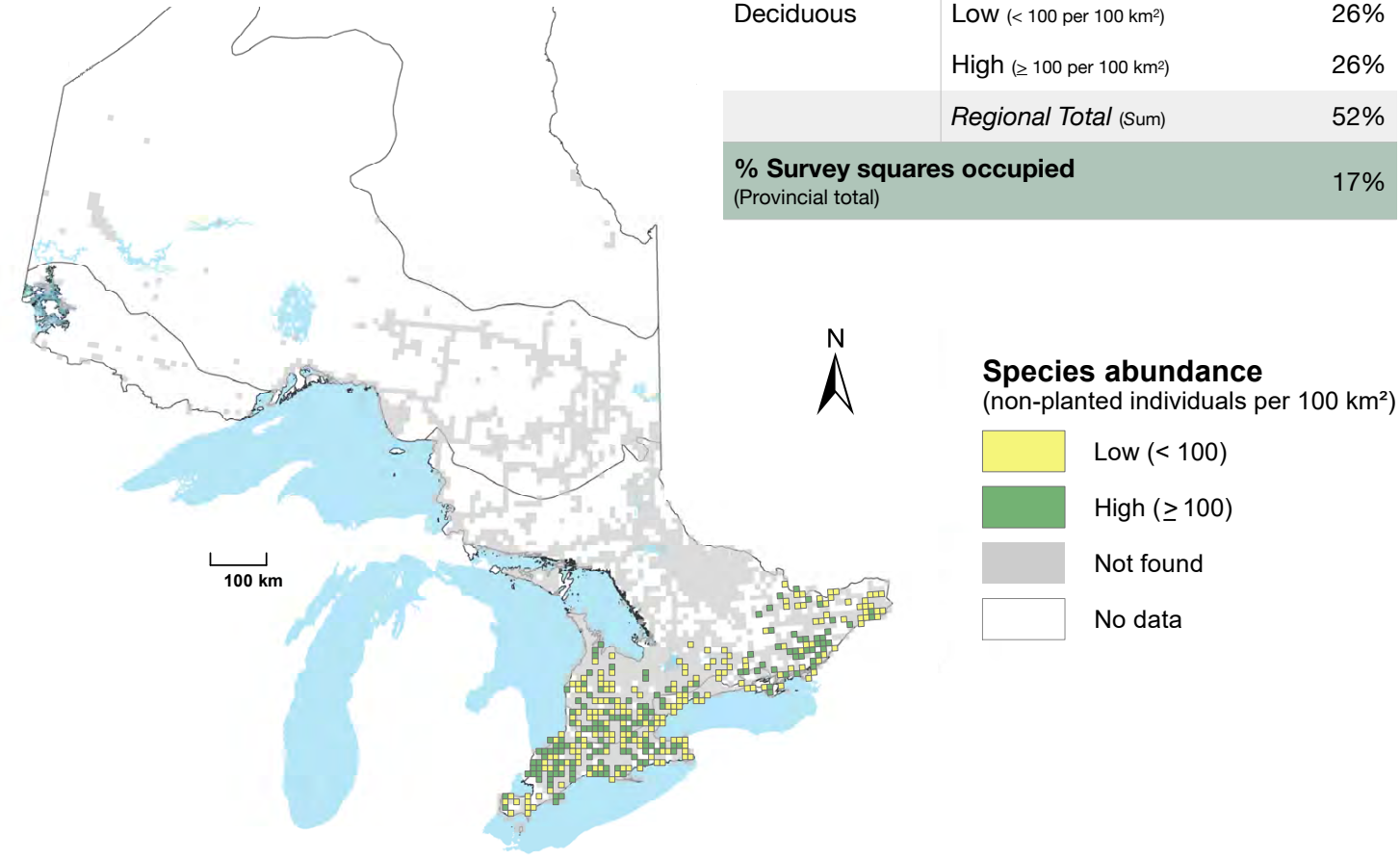
Native to Ontario

Reported distribution: The distribution of blue-beech in Ontario was confined to the Great Lakes - St. Lawrence and deciduous forest regions. Blue-beech grew from the southwest to eastern edges of the province, although there were numerous survey squares within this area where the species was not identified.

Reported abundance: Blue-beech occurred at a moderate abundance within its distribution with about half of the survey squares having ≥ 100 individuals. In general, the species was most abundant along a band extending from the southwest to eastern edge of the province.

Table 35 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

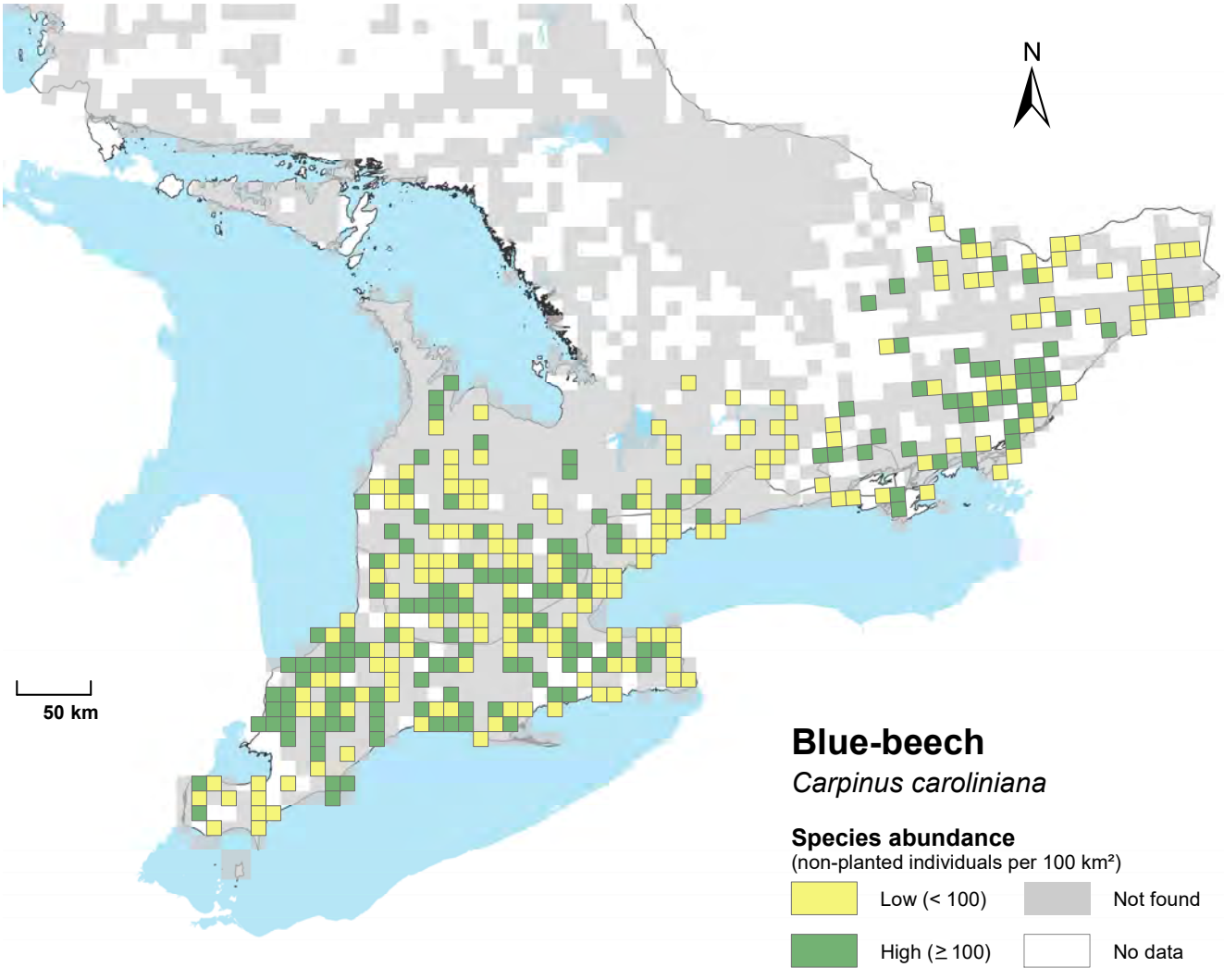
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	7%
	Regional Total (Sum)	16%
Deciduous	Low (< 100 per 100 km²)	26%
	High (≥ 100 per 100 km²)	26%
	Regional Total (Sum)	52%
% Survey squares occupied (Provincial total)		17%



Blue-beech | Charme de Caroline

Carpinus caroliniana

The reported distribution and abundance of blue-beech in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Bitternut hickory | Caryer cordiforme

Carya cordiformis

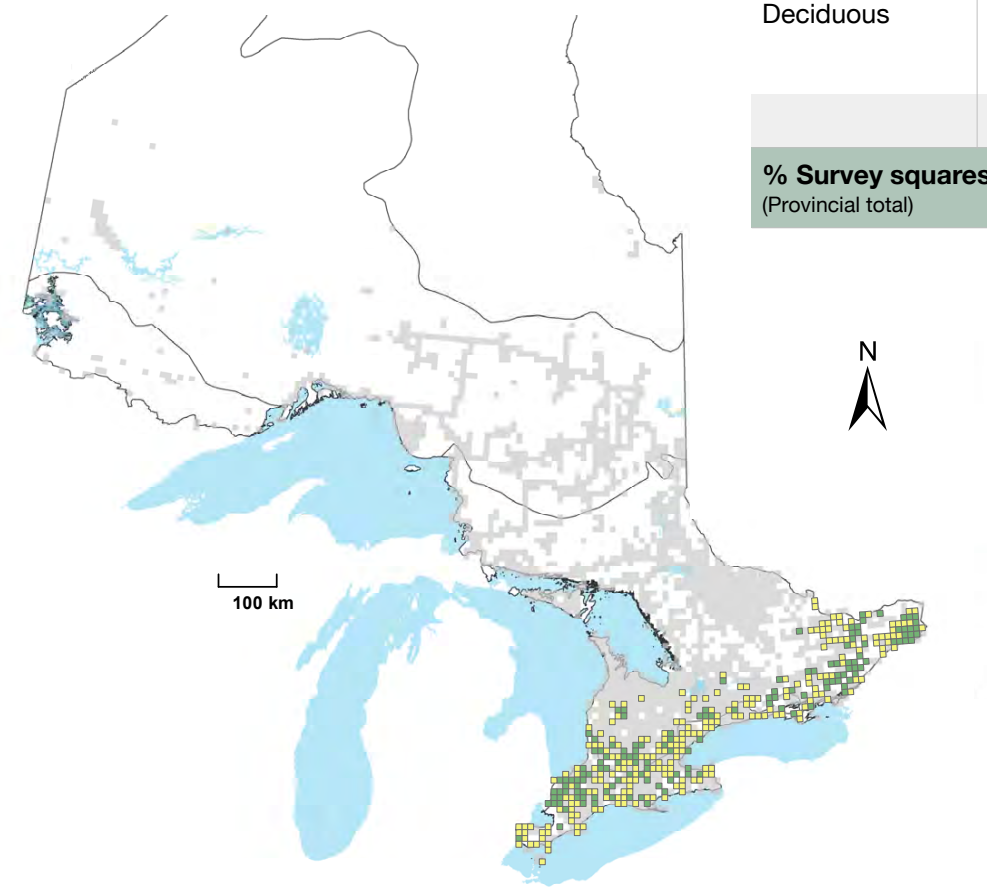
Native to Ontario

Reported distribution: Bitternut hickory primarily occurred in a band to the north of Lakes Erie and Ontario that extended to the eastward across the province. The species was not observed in northern Ontario and was most commonly found in the deciduous forest region where it occupied 55% of surveyed squares.

Reported abundance: Bitternut hickory had a low overall abundance in the province due to its fairly limited range. The species occurred at low abundance (< 100 individuals) in most of the survey squares in which it was observed. It did, however, grow at high abundance in several clusters within its distribution.

Table 36 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

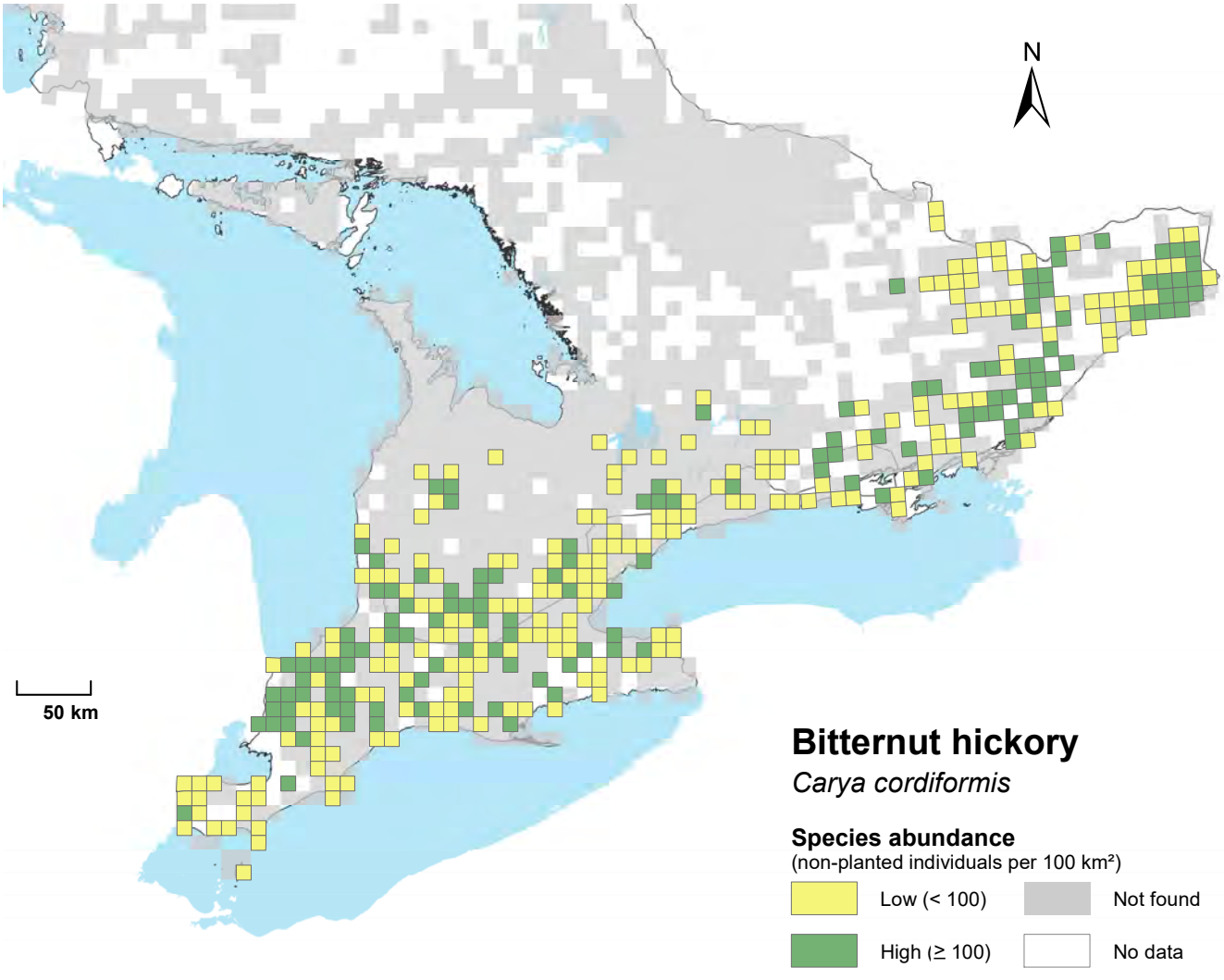
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	7%
	Regional Total (Sum)	16%
Deciduous	Low (< 100 per 100 km²)	36%
	High (≥ 100 per 100 km²)	19%
	Regional Total (Sum)	55%
% Survey squares occupied (Provincial total)		18%



Bitternut hickory | Caryer cordiforme

Carya cordiformis

The reported distribution and abundance of bitternut hickory in squares surveyed in southern Ontario (below 47°N)



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Pignut hickory | Caryer glabre

Carya glabra

Native to Ontario

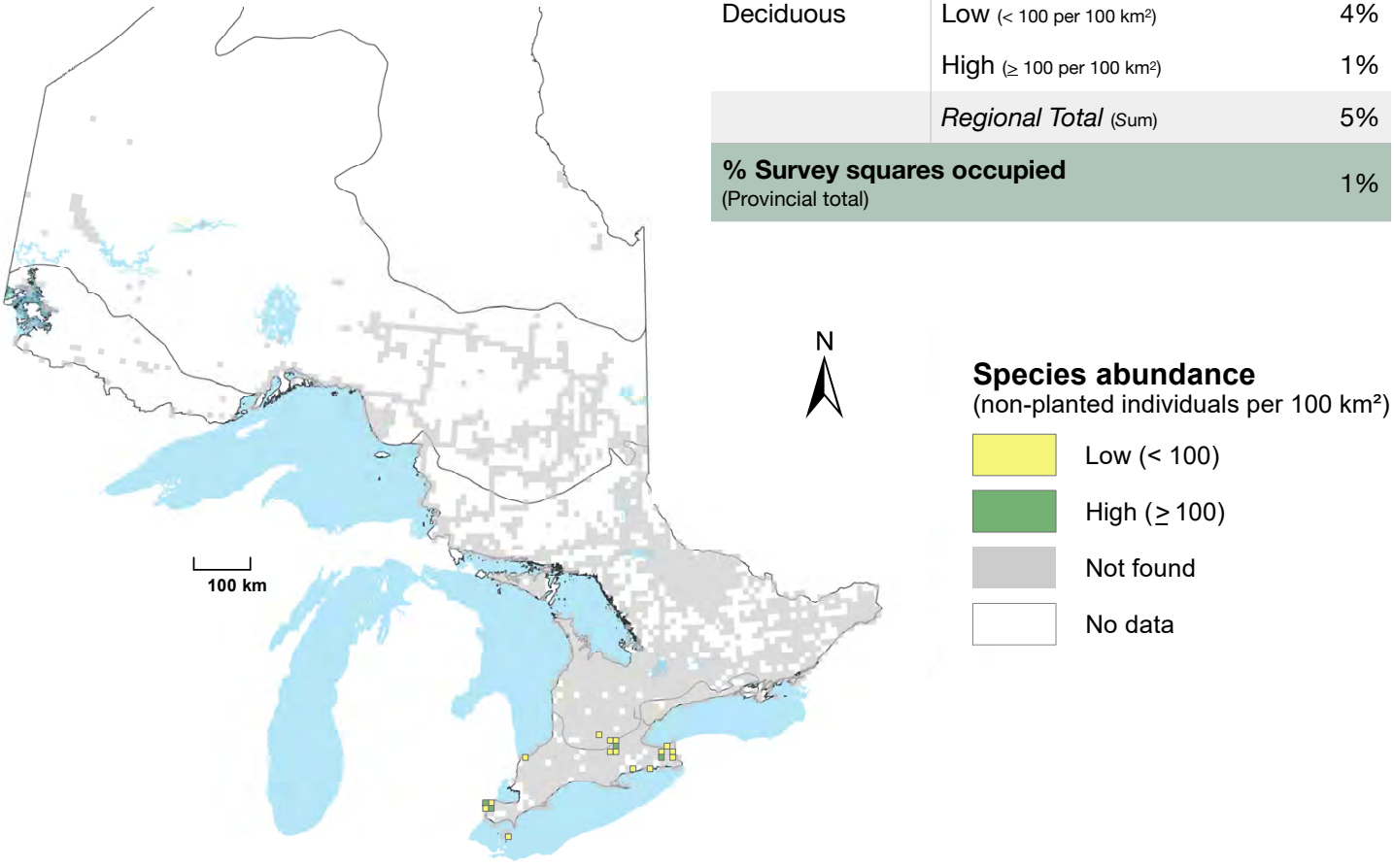
Reported distribution: Pignut hickory had a very limited distribution in Ontario. The species was observed in only 1% of survey squares, which were clustered in three main areas in southwestern Ontario.

Reported abundance: Pignut hickory had a low abundance in Ontario and ≥ 100 individuals were observed in only 3 of the 21 squares in which the species was found growing.

The limited distribution and low overall abundance of pignut hickory in the survey squares suggest the species is rarely encountered in Ontario.

Table 37 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

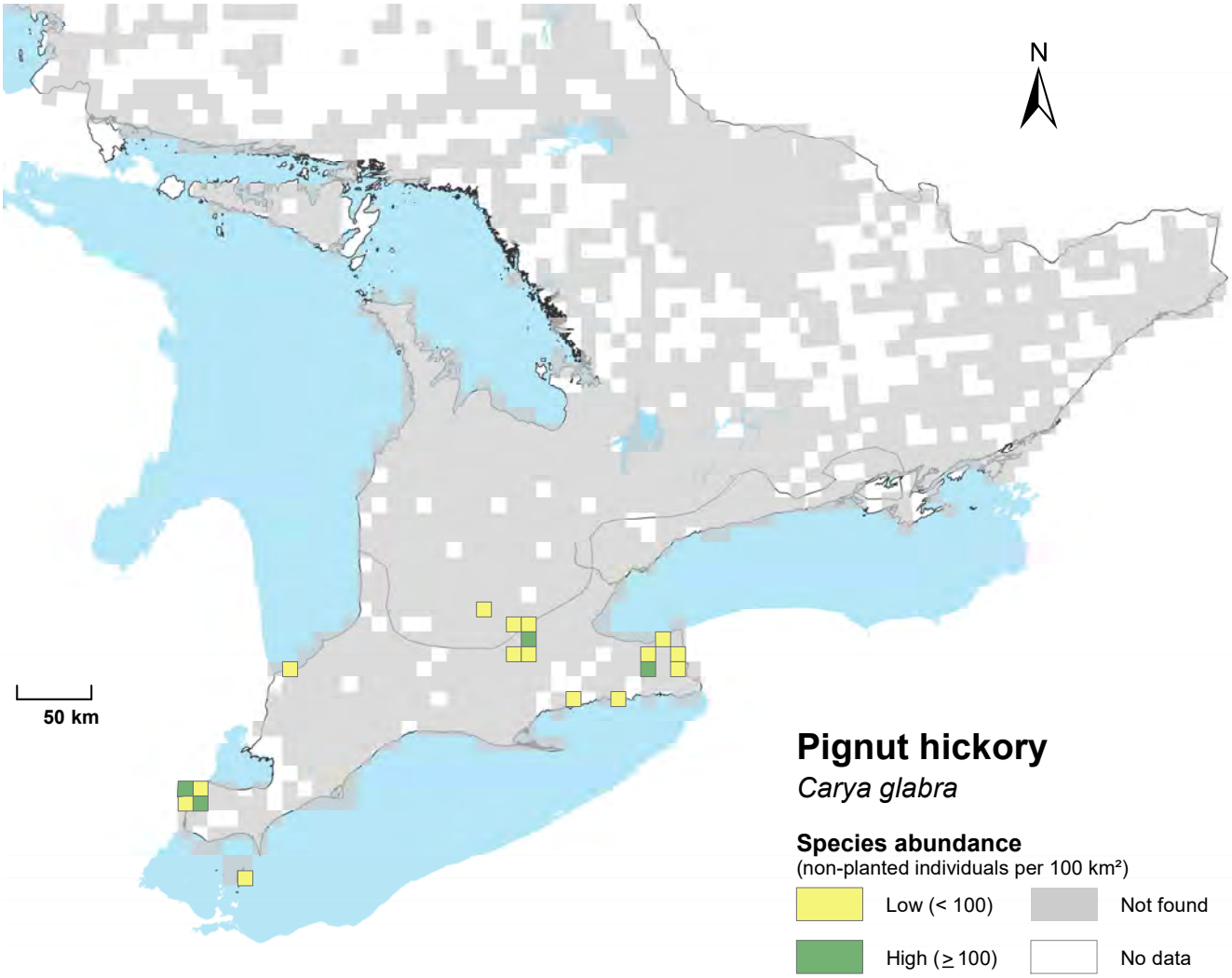
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	5%
% Survey squares occupied (Provincial total)		1%



Pignut hickory | Caryer glabre

Carya glabra

The reported distribution and abundance of pignut hickory in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Shellbark hickory | Caryer lacinié

Carya laciniosa

Native to Ontario

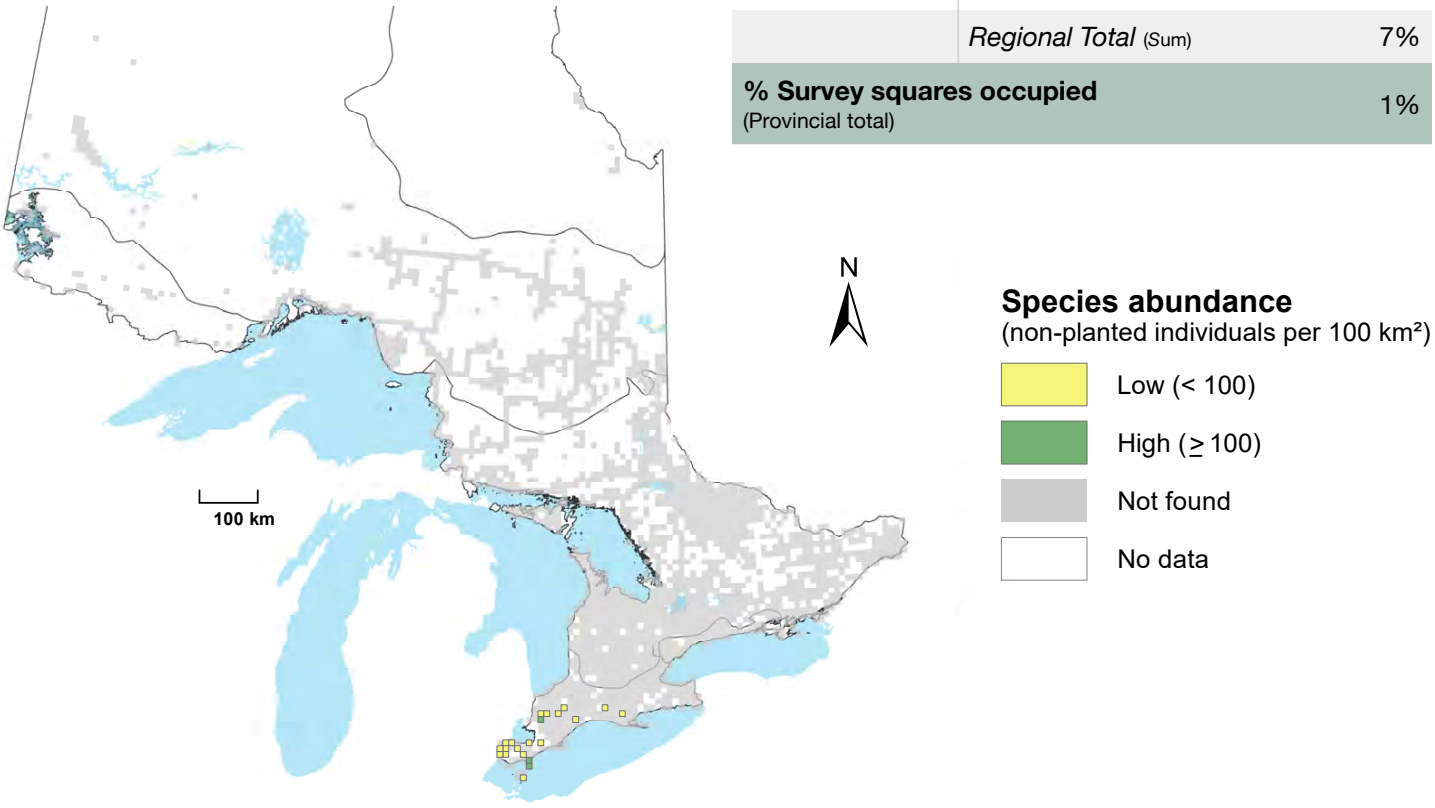
Reported distribution: Shellbark hickory had a limited distribution in Ontario and were primarily observed in the southwest of the province. The species was limited to the deciduous forest region where it occupied 7% of surveyed squares.

Reported abundance: Occurring in only 21 survey squares, shellbark hickory was rarely encountered in Tree Atlas surveys. Within its distribution, it occurred most often at low abundance, with only three survey squares having ≥ 100 individuals.

The limited distribution and low overall abundance of shellbark hickory in survey squares suggests it is an uncommon species in Ontario.

Table 38 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

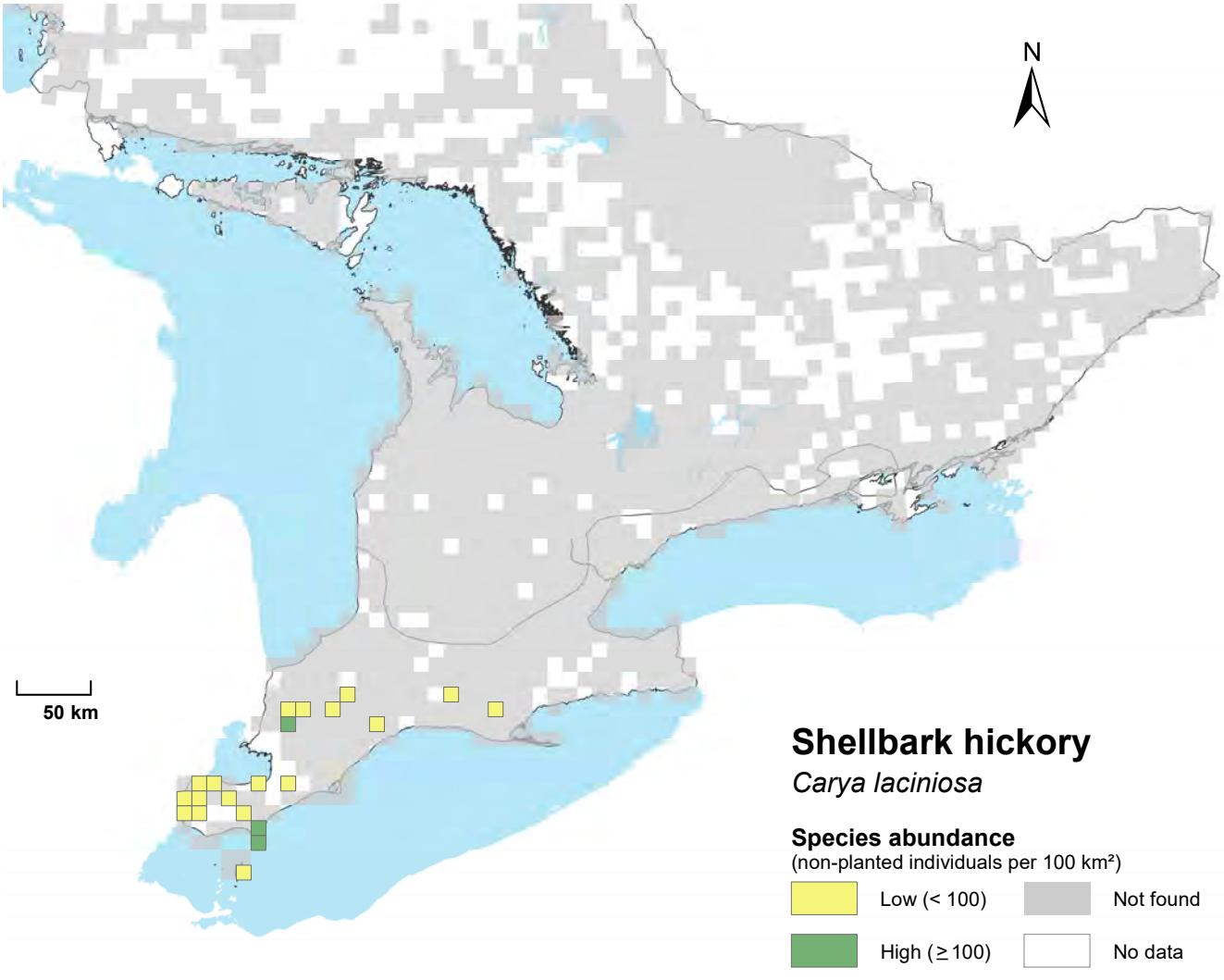
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	7%
% Survey squares occupied (Provincial total)		1%



Shellbark hickory | Caryer lacinié

Carya laciniosa

The reported distribution and abundance of shellbark hickory in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Shagbark hickory | Caryer ovale

Carya ovata

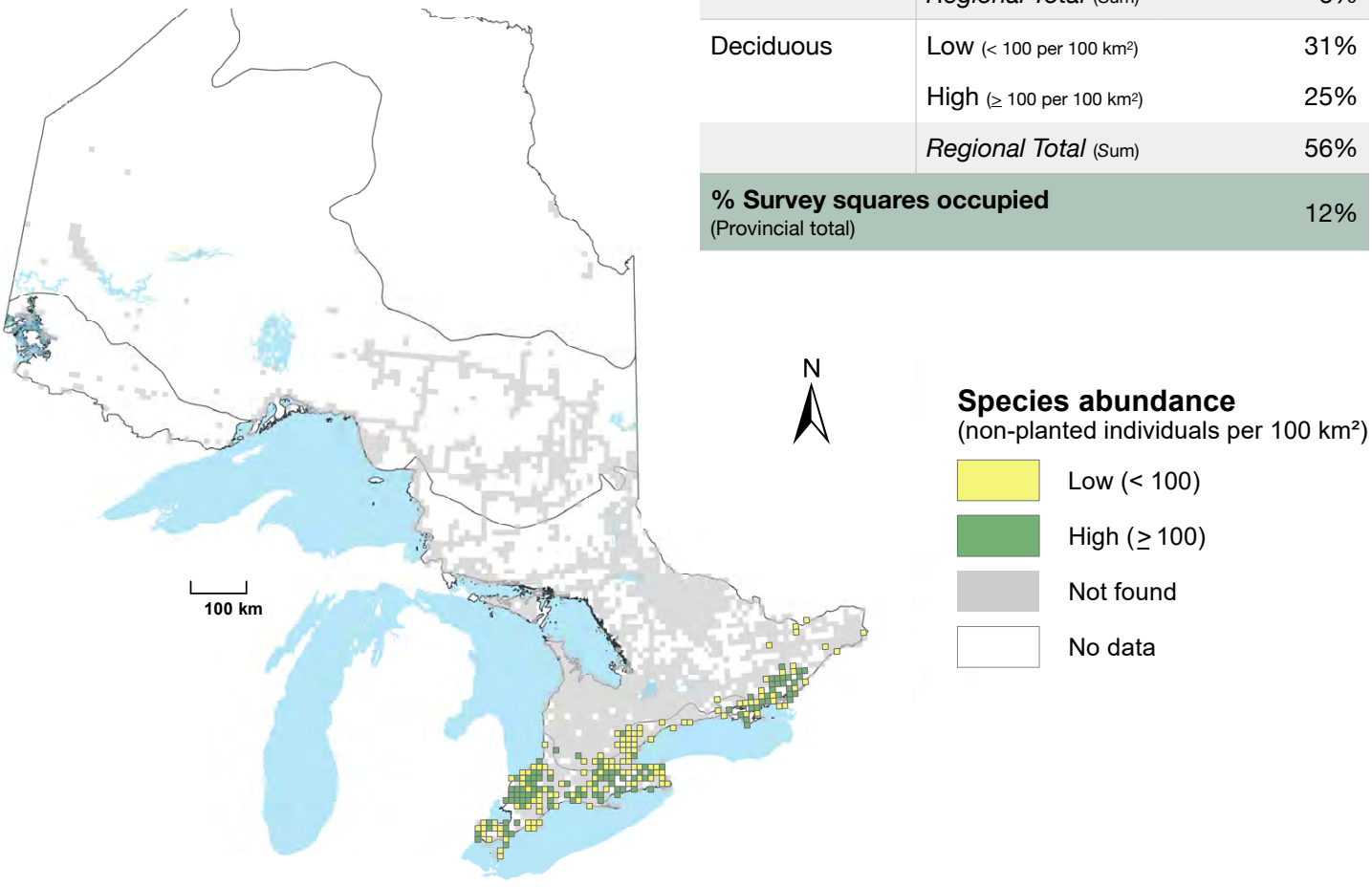
Native to Ontario

Reported distribution: The distribution of shagbark hickory was restricted to southern Ontario. The species was primarily observed in the deciduous forest region where it occupied 62% of survey squares, and in the southeast portion of the Great Lakes - St. Lawrence forest region.

Reported abundance: Although shagbark hickory had a small to moderate range in Ontario (occupying 12% of squares surveyed), the species was fairly common within its distribution. Shagbark hickory occurred at high abundance (≥ 100 individuals) in about half of the survey squares in which it was observed.

Table 39 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

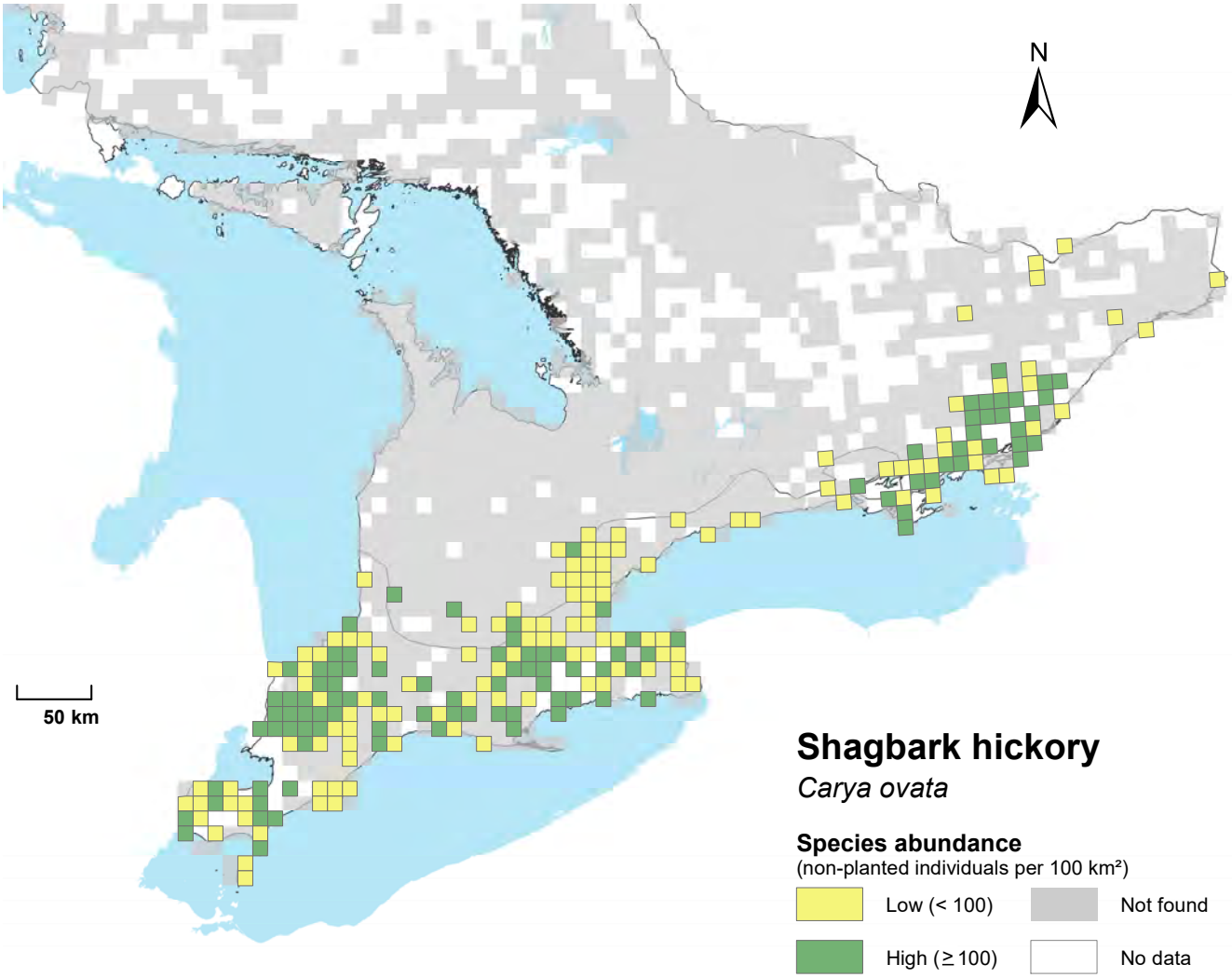
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	6%
Deciduous	Low (< 100 per 100 km²)	31%
	High (≥ 100 per 100 km²)	25%
	Regional Total (Sum)	56%
% Survey squares occupied (Provincial total)		12%



Shagbark hickory | Caryer ovale

Carya ovata

The reported distribution and abundance of shagbark hickory in squares surveyed in southern Ontario (below 47°N)



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American chestnut | Châtaignier d'Amérique

Castanea dentata

Native to Ontario

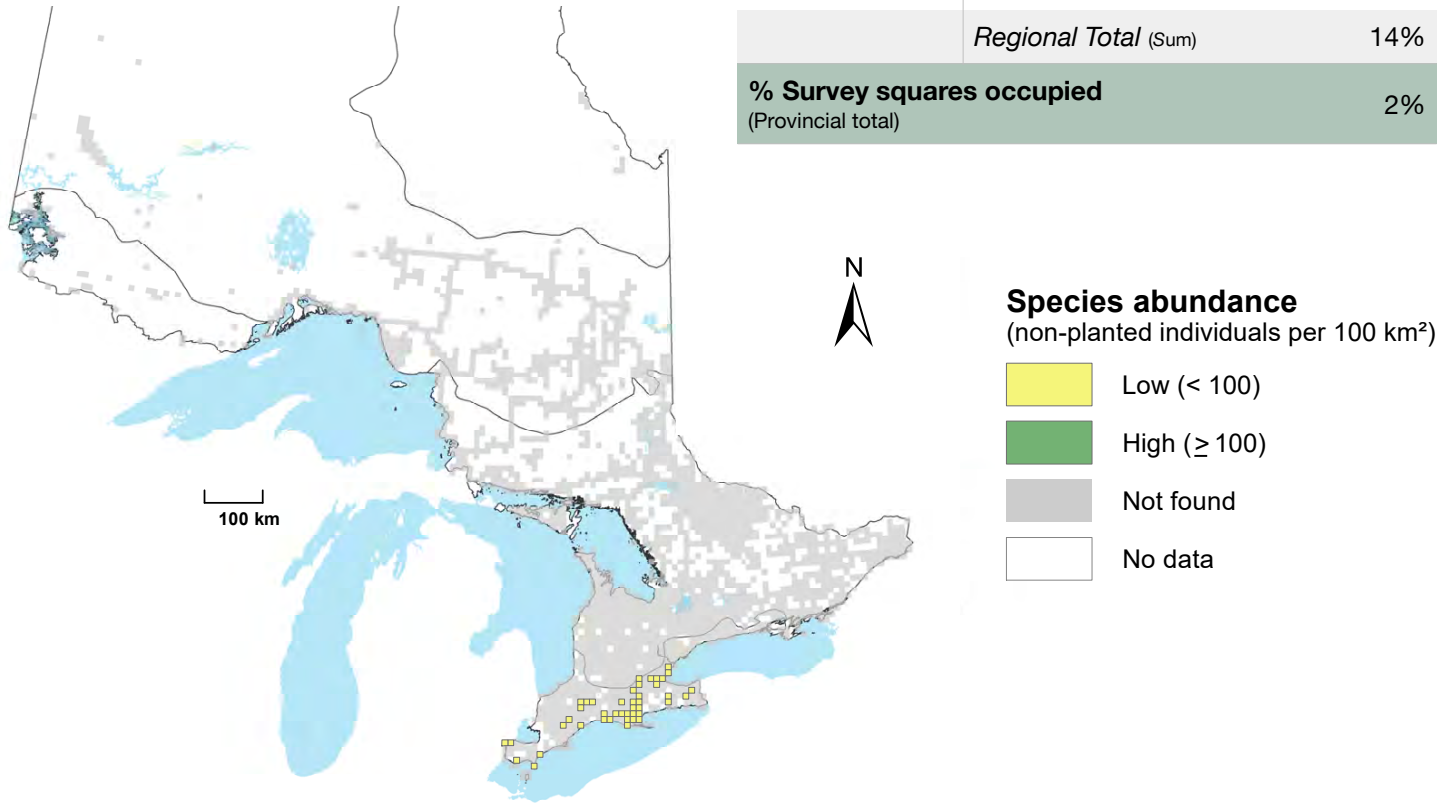
Reported distribution: American chestnut had a very limited distribution in Ontario. It was observed in 41 survey squares, all of which were in the deciduous forest region of southwestern Ontario.

Reported abundance: Within its limited distribution, American chestnut was only found at low abundance (< 100 individuals per square).

American chestnut is listed as an endangered species in Ontario due to its limited distribution and low abundance. The Ontario population of American chestnut represents the entirety of the species' range in Canada, much of which has been decimated by historical and ongoing infection from chestnut blight.

Table 40 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

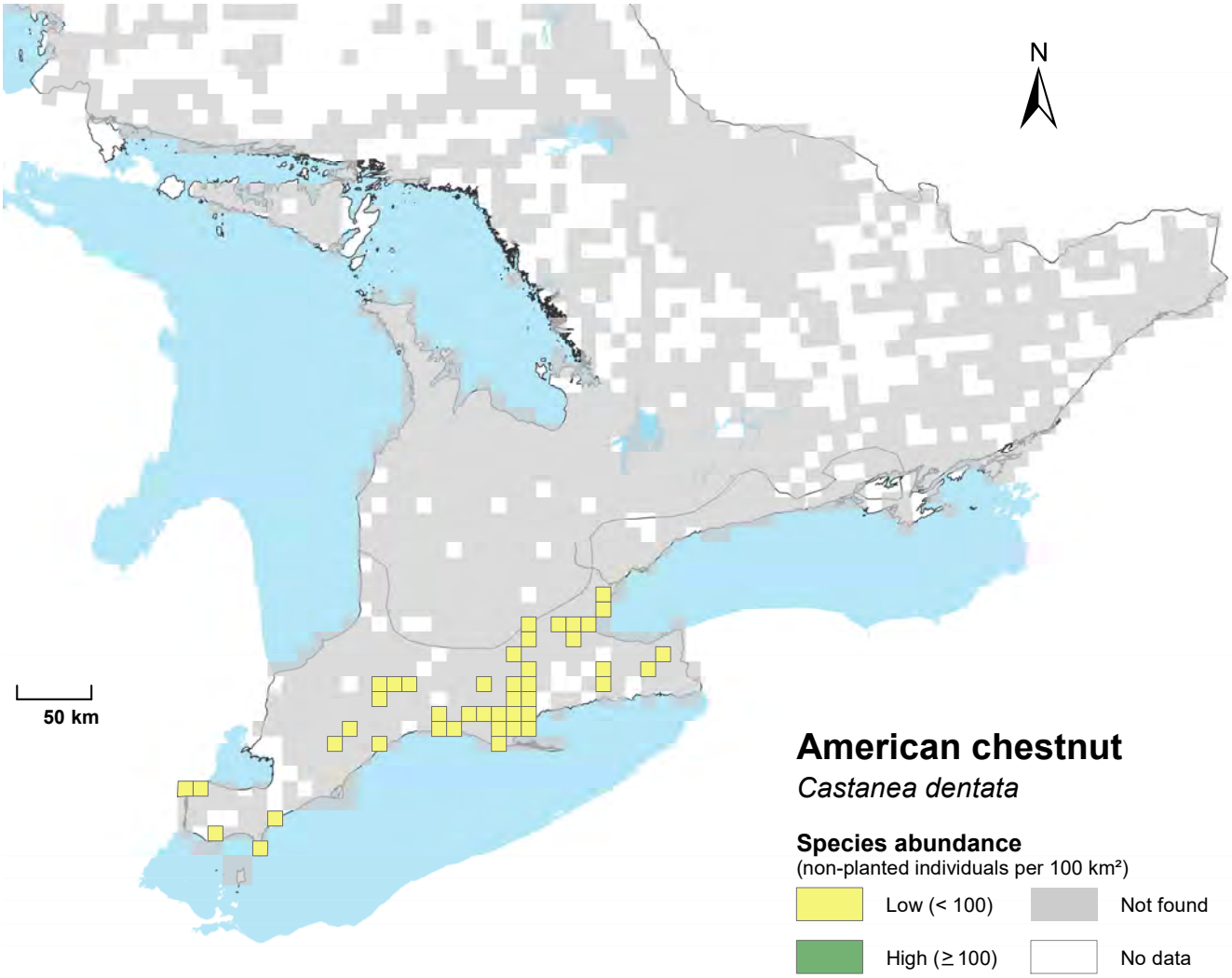
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	14%
% Survey squares occupied (Provincial total)		2%



American chestnut | Châtaignier d'Amérique

Castanea dentata

The reported distribution and abundance of American chestnut in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Common hackberry | Micocoulier occidental

Celtis occidentalis

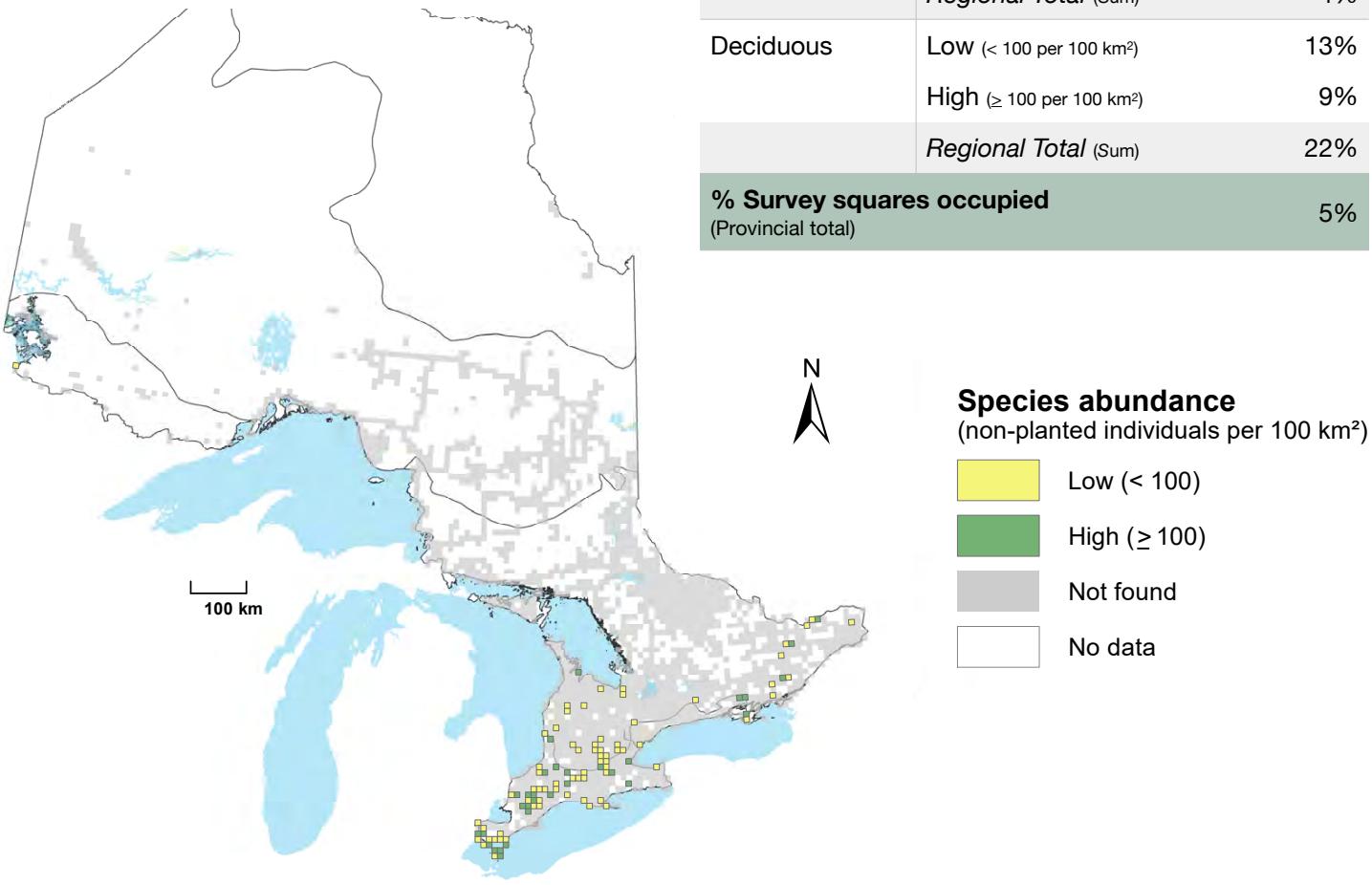
Native to Ontario

Reported distribution: Common hackberry had a patchy distribution throughout southern Ontario. The species was observed most commonly in the deciduous forest and in the southern portion of the Great Lakes - St. Lawrence forest region; however, common hackberry was also identified in a number of survey squares in eastern Ontario.

Reported abundance: Common hackberry tended to grow at low abundance (< 100 individuals per survey square) throughout their range. Combined with a relatively limited distribution, common hackberry had a low overall abundance in the province.

Table 41 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

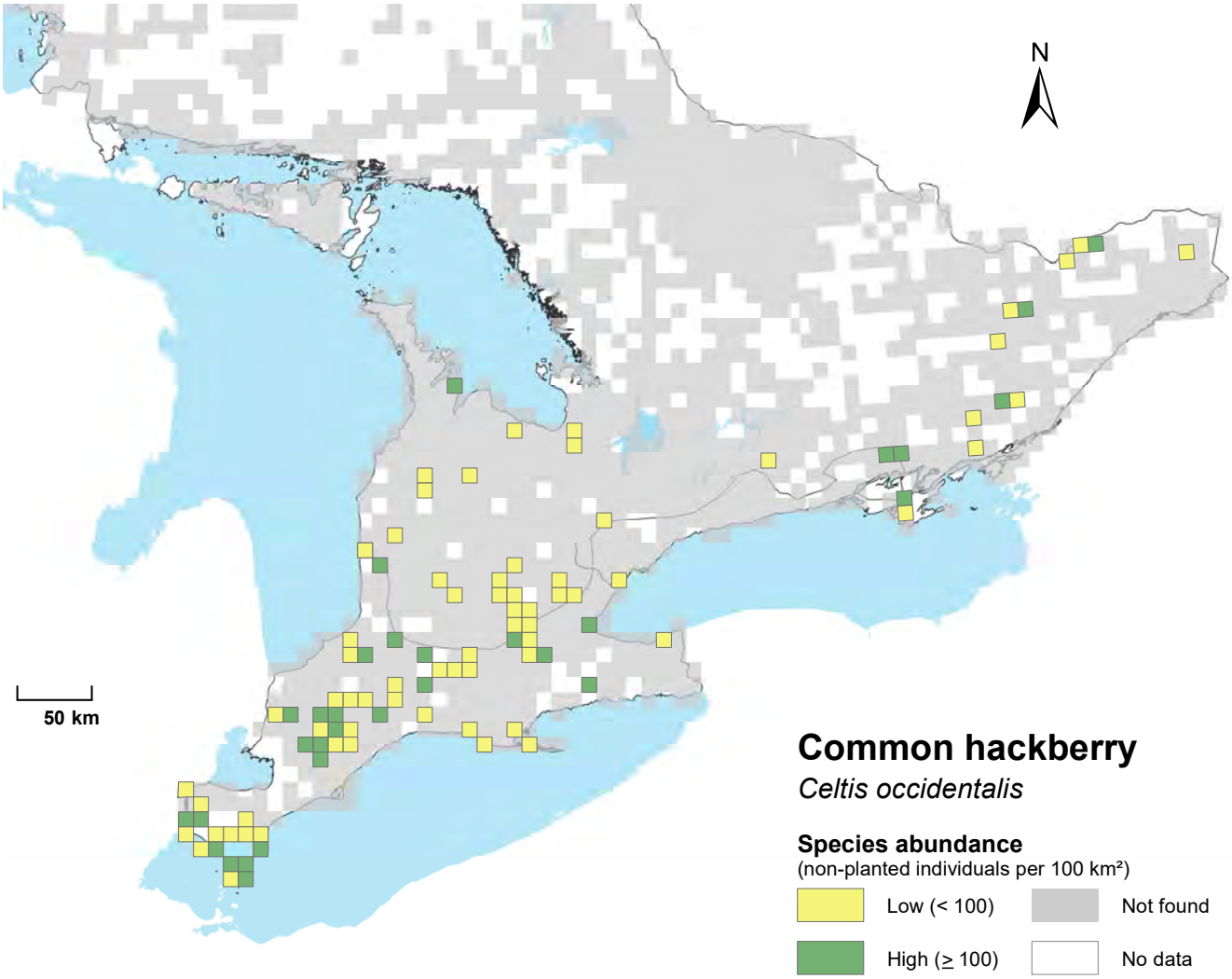
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	4%
Deciduous	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	9%
	Regional Total (Sum)	22%
% Survey squares occupied (Provincial total)		5%



Common hackberry | Micocoulier occidental

Celtis occidentalis

The reported distribution and abundance of common hackberry in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Dwarf hackberry | Micocoulier rabougri

Celtis tenuifolia

Native to Ontario

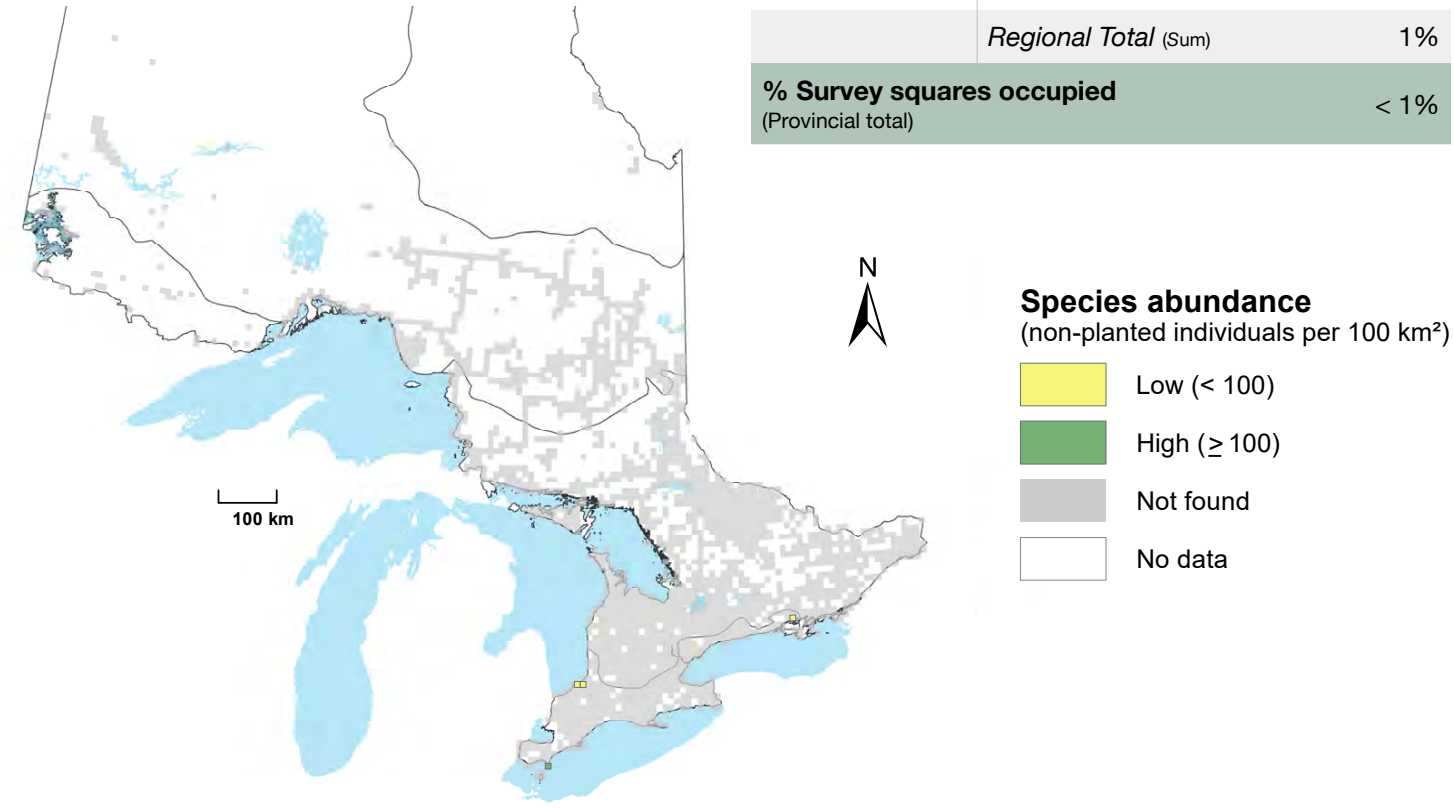
Reported distribution: Dwarf hackberry had an extremely limited distribution in Ontario. The species was identified in only four survey squares, which were separated into three isolated areas of southern Ontario.

Reported abundance: Dwarf hackberry had a very low overall abundance in Ontario. The species grew at low abundance (< 100 individuals) in three of four squares in which it was identified

The Ontario population of dwarf hackberry represents the northern extent of the species' range in North America. The low abundance and very limited distribution of dwarf hackberry in survey squares reflect their status as a threatened species in Canada.

Table 42 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

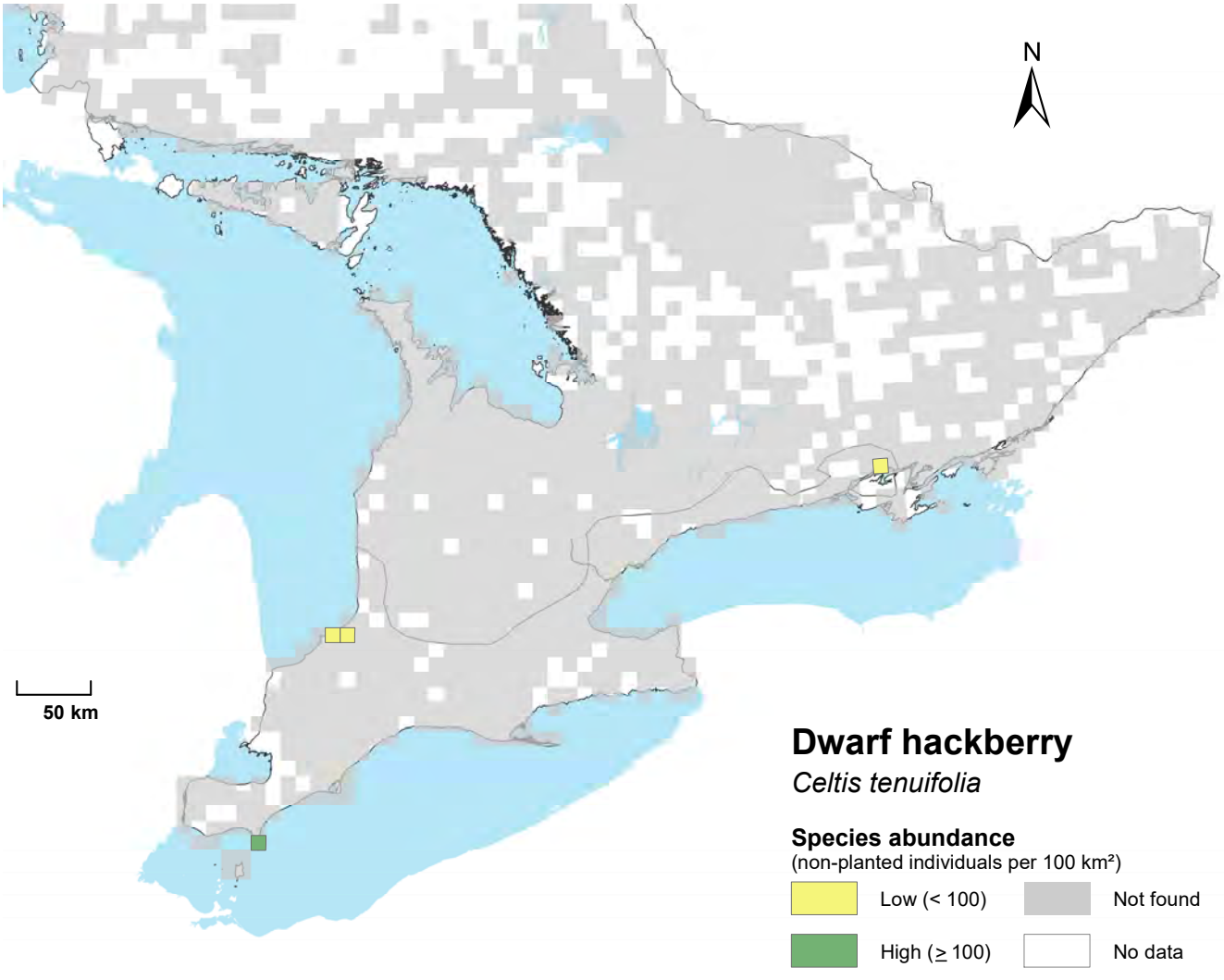
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	1%
% Survey squares occupied (Provincial total)		< 1%



Dwarf hackberry | Micocoulier rabougri

Celtis tenuifolia

The reported distribution and abundance of dwarf hackberry in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Alternate-leaved dogwood | Cornouiller à feuilles alternes

Cornus alternifolia

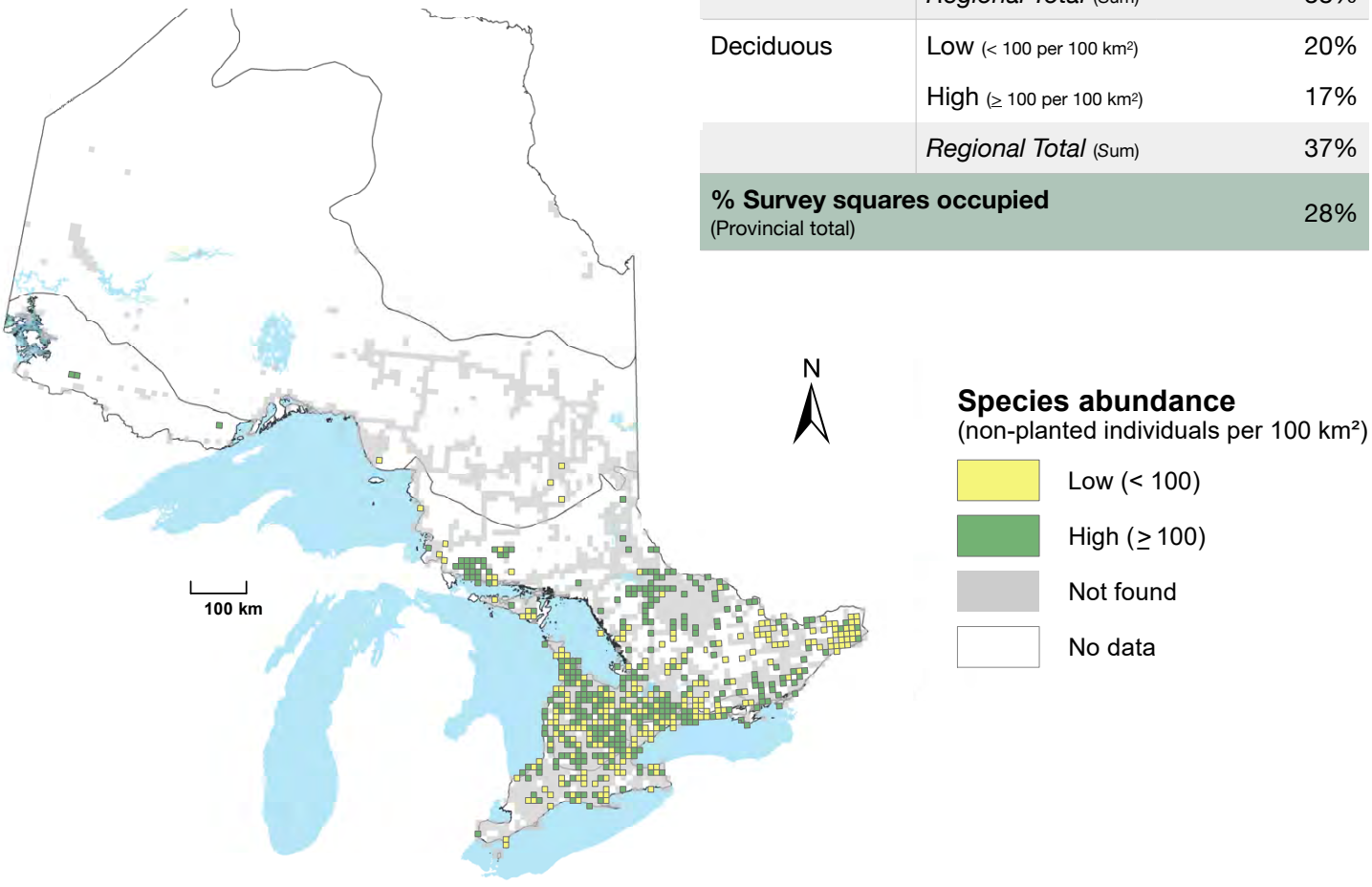
Native to Ontario

Reported distribution: Alternate-leaved dogwood was widely distributed throughout southern and central Ontario. The species was observed in 37% and 38% of survey squares in the deciduous and Great Lakes - St. Lawrence forest regions, respectively. Alternate-leaved dogwoods were rarely observed north of 47°N latitude and were infrequently encountered in the extreme southwest of the province.

Reported abundance: Alternate-leaved dogwood was fairly abundant within its range, with the majority of survey squares in which it was observed having ≥ 100 individuals.

Table 43 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

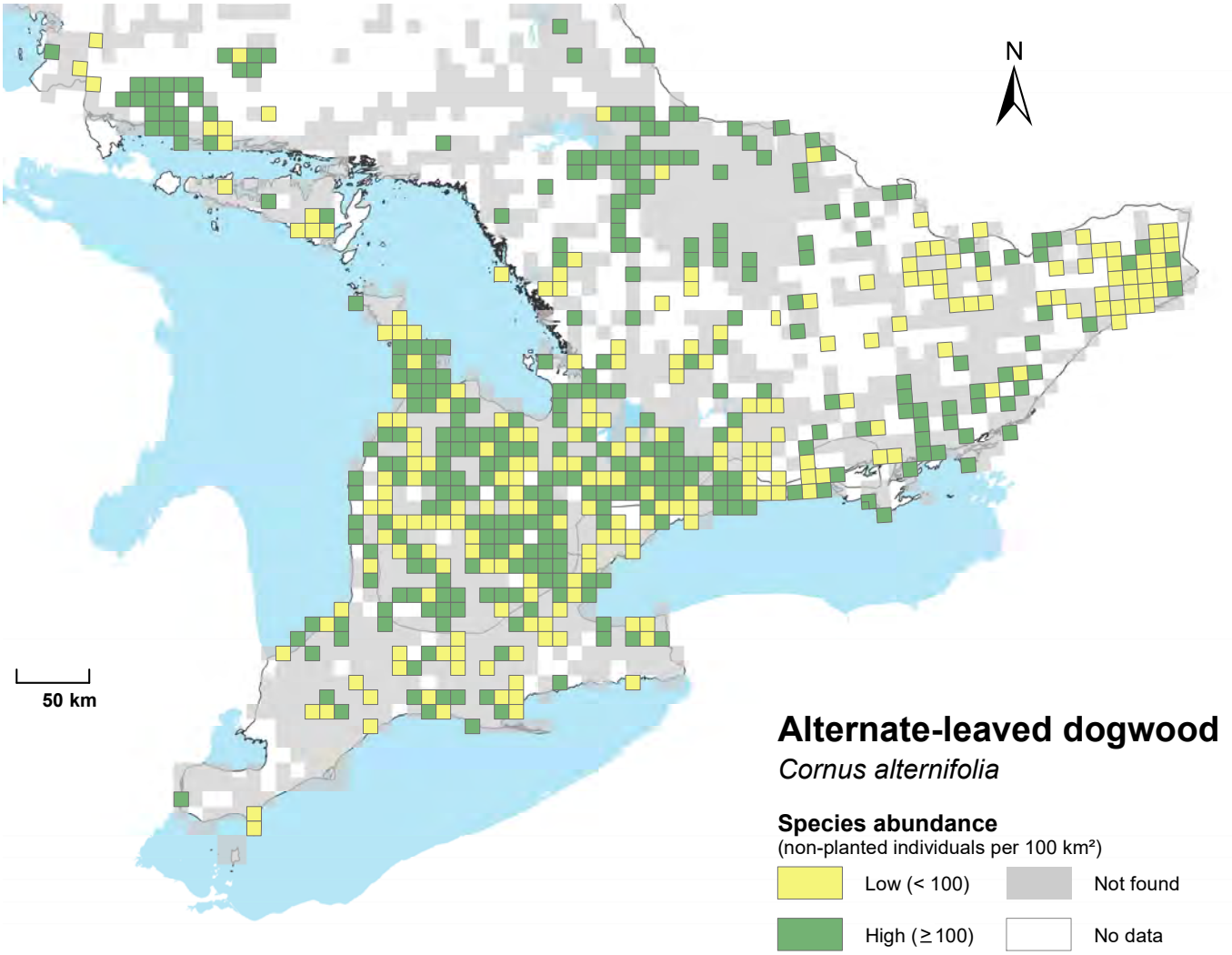
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	24%
	Regional Total (Sum)	38%
Deciduous	Low (< 100 per 100 km²)	20%
	High (≥ 100 per 100 km²)	17%
	Regional Total (Sum)	37%
% Survey squares occupied (Provincial total)		28%



Alternate-leaved dogwood | Cornouiller à feuilles alternes

Cornus alternifolia

The reported distribution and abundance of alternate-leaved dogwood in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Eastern flowering dogwood | Cornouiller fleuri

Cornus florida

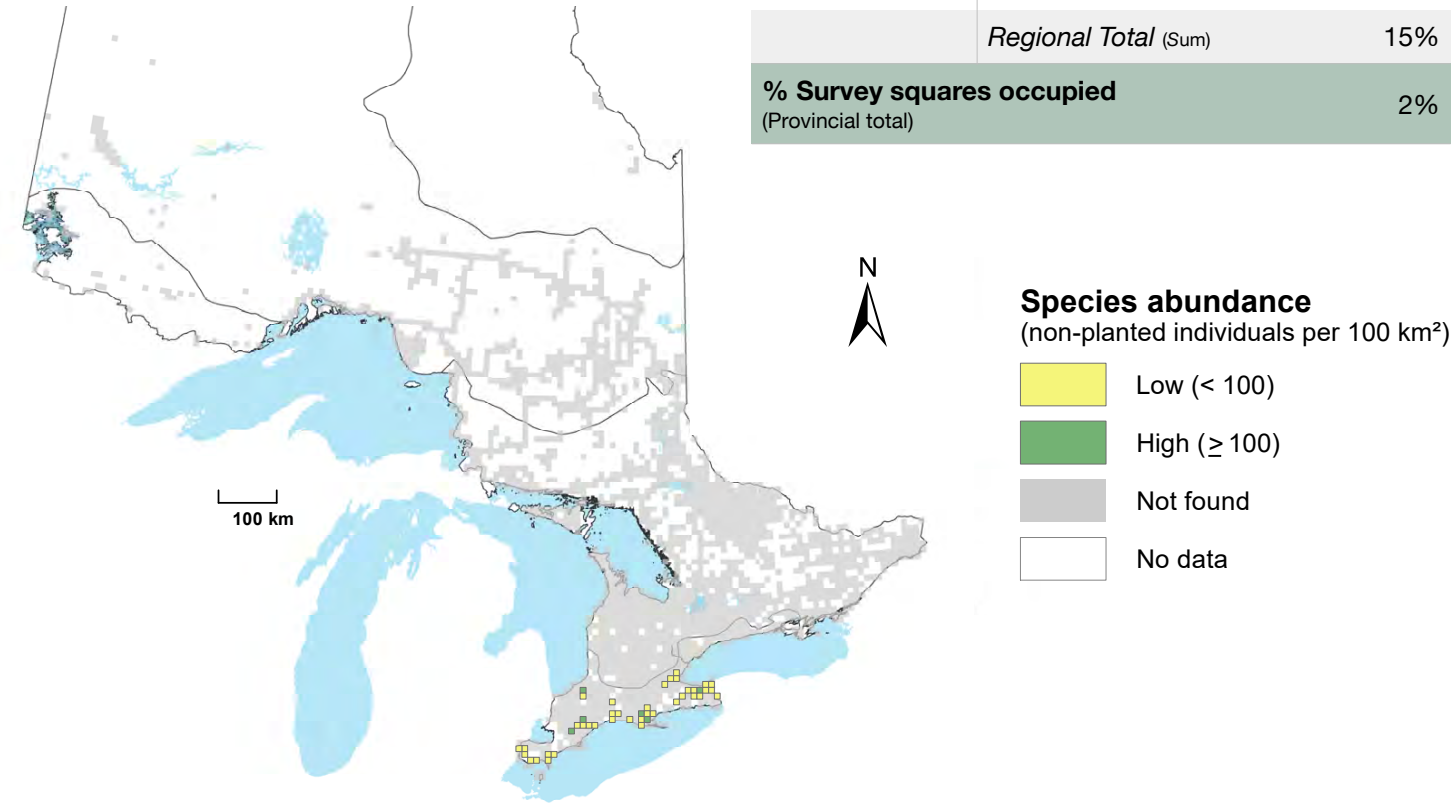
Native to Ontario

Reported distribution: Eastern flowering dogwood had a limited distribution in Ontario and was observed in survey squares scattered throughout the southwest of the province. Its distribution was exclusive to the deciduous forest region where eastern flowering dogwoods were observed in 15% of surveyed squares.

Reported abundance: Eastern flowering dogwood had a low overall abundance in Ontario, although the species was also identified at high levels of abundance (≥ 100 individuals) in a small number of squares surveyed within its range. Decline due to habitat loss and infection from dogwood anthracnose has led to an endangered species designation in Ontario.

Table 44 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

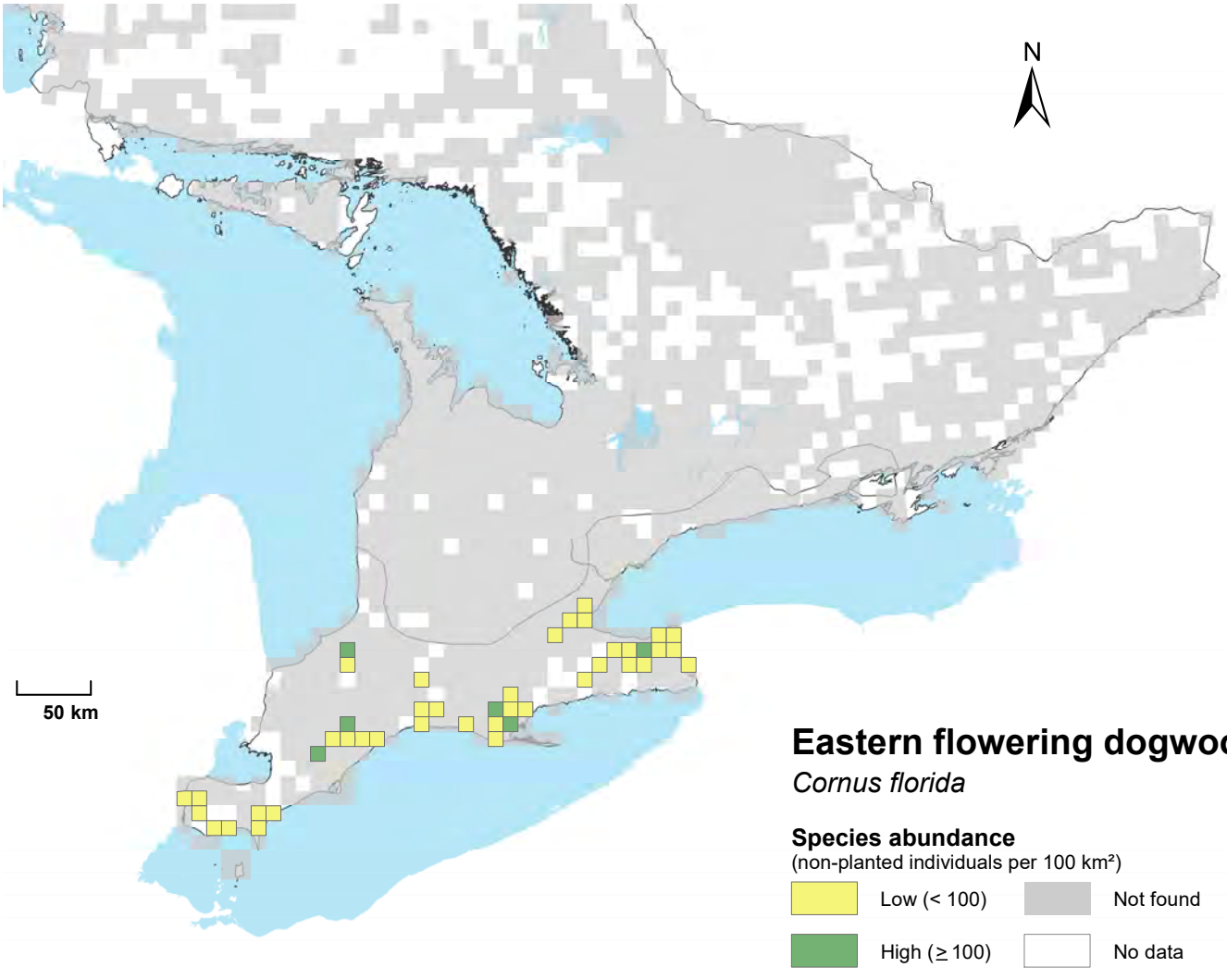
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	15%
% Survey squares occupied (Provincial total)		2%



Eastern flowering dogwood | Cornouiller fleuri

Cornus florida

The reported distribution and abundance of eastern flowering dogwood in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Cockspur hawthorn | Aubépine ergot-de-coq

Crataegus crus-galli

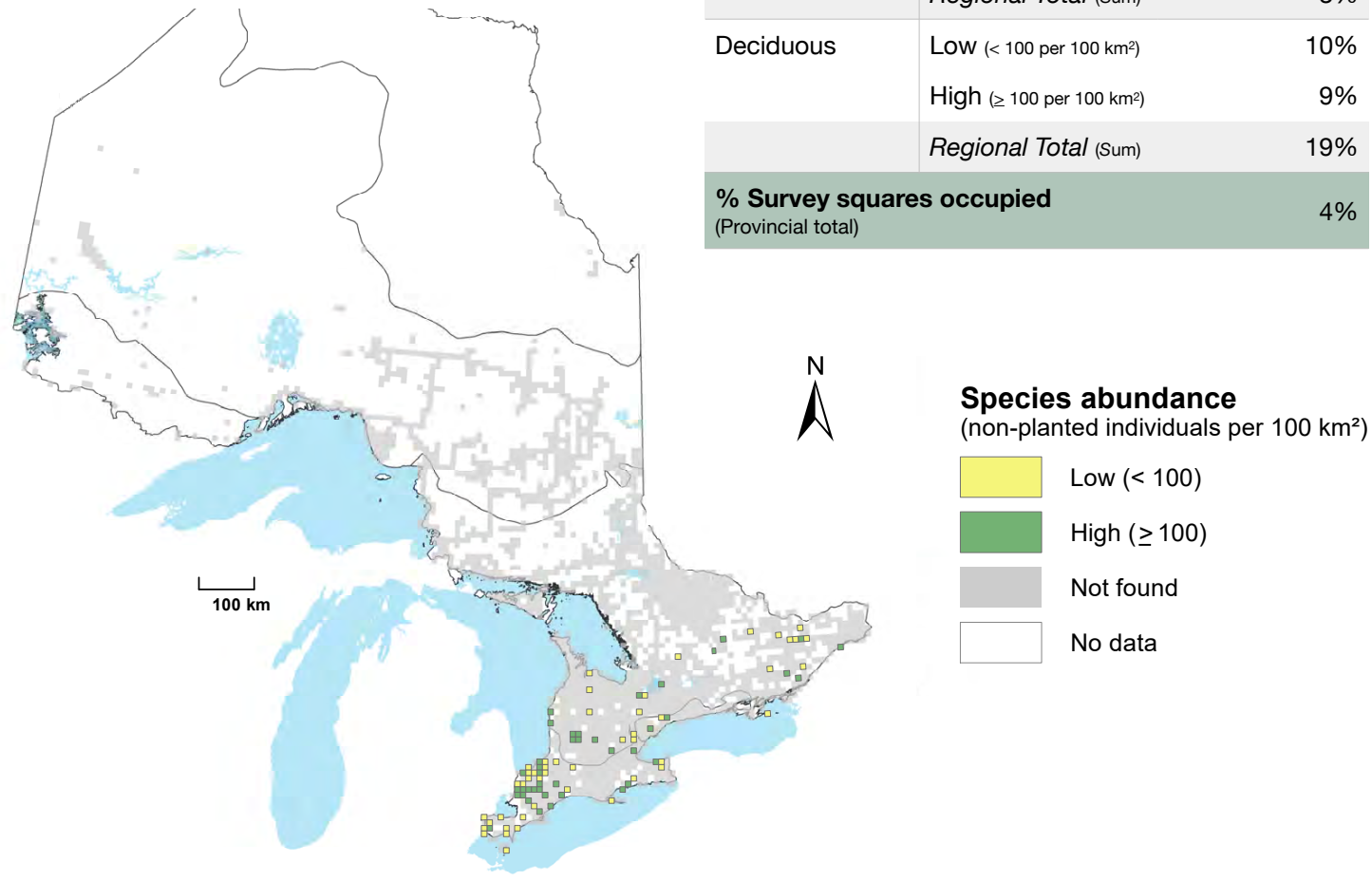
Native to Ontario

Reported distribution: The distribution of cockspur hawthorn in Ontario occurred below 45°N latitude. The species' distribution was most continuous in southwestern Ontario and was relatively scattered throughout the remainder of the provincial range. Cockspur hawthorn was observed in only 4% of squares surveyed in the province.

Reported abundance: Cockspur hawthorn had a relatively low overall abundance in Ontario. The species was most common in the deciduous forest region where it was observed at a high level of abundance in 9% of survey squares.

Table 45 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

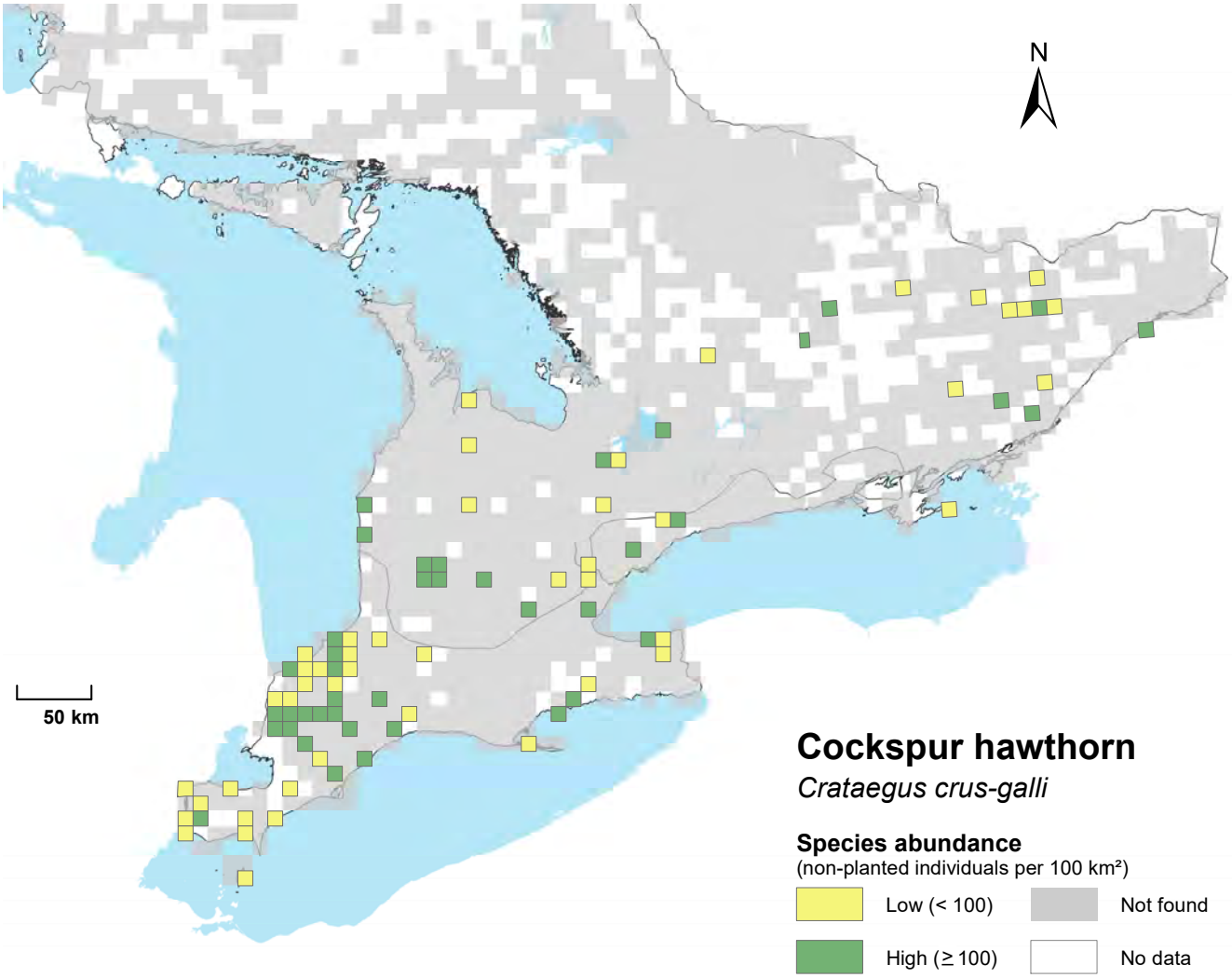
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	9%
	Regional Total (Sum)	19%
% Survey squares occupied (Provincial total)		4%



Cockspur hawthorn | Aubépine ergot-de-coq

Crataegus crus-galli

The reported distribution and abundance of cockspur hawthorn in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Hawthorn | Aubépine

Crataegus spp.

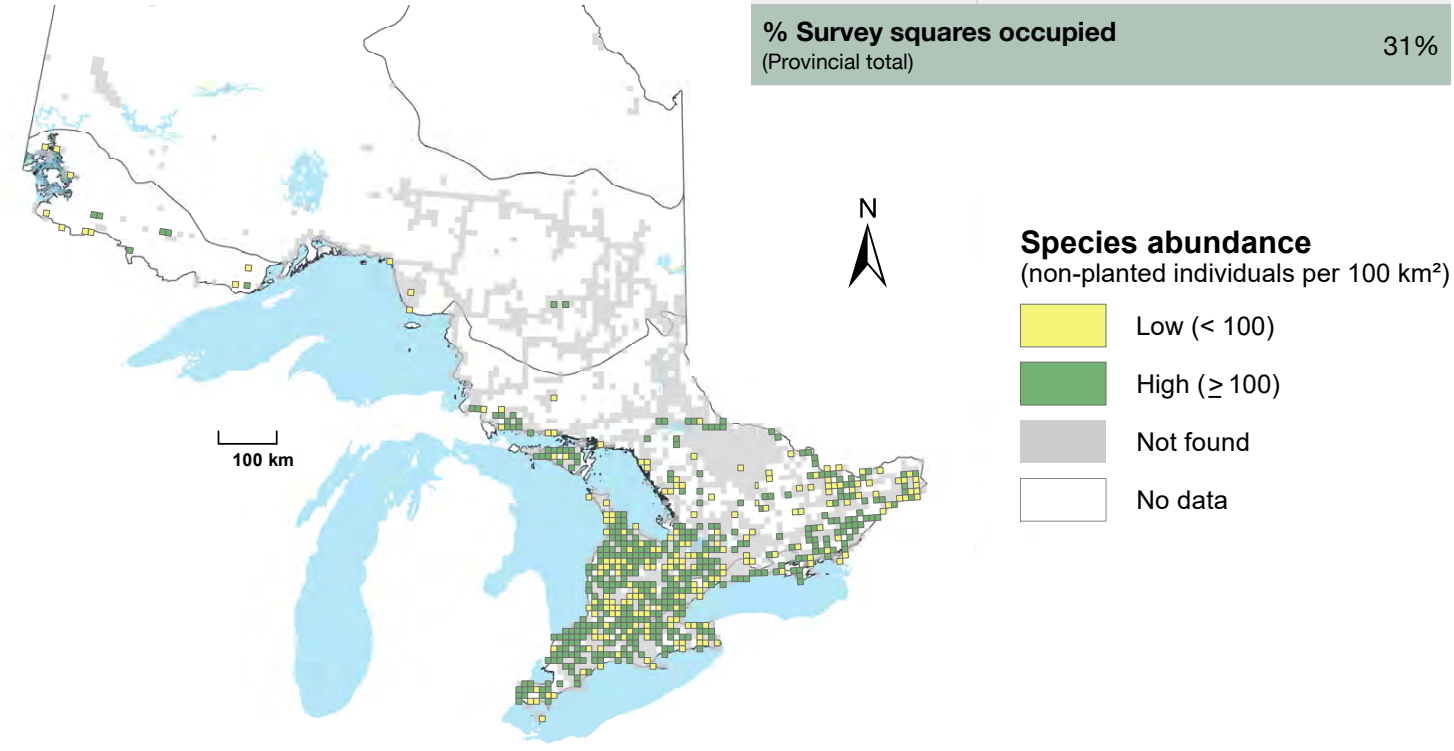
Native to Ontario

Reported distribution: Species of hawthorn were widely distributed throughout southern Ontario, particularly in the southwest and eastern regions of the province. The species occupied 60% of squares surveyed in the deciduous forest region. Hawthorns were also identified in a number of squares in central Ontario.

Reported abundance: Hawthorns are relatively common in Ontario and grew at high abundance (≥ 100 individuals) in 23% and 43% of squares in the Great Lakes - St. Lawrence and deciduous regions. Over 50 hawthorn species, varieties and hybrids are currently recognized in Ontario, with potentially many more present. Further observations will help to determine individuals to the species level and provide a more comprehensive understanding of the distribution for each.

Table 46 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

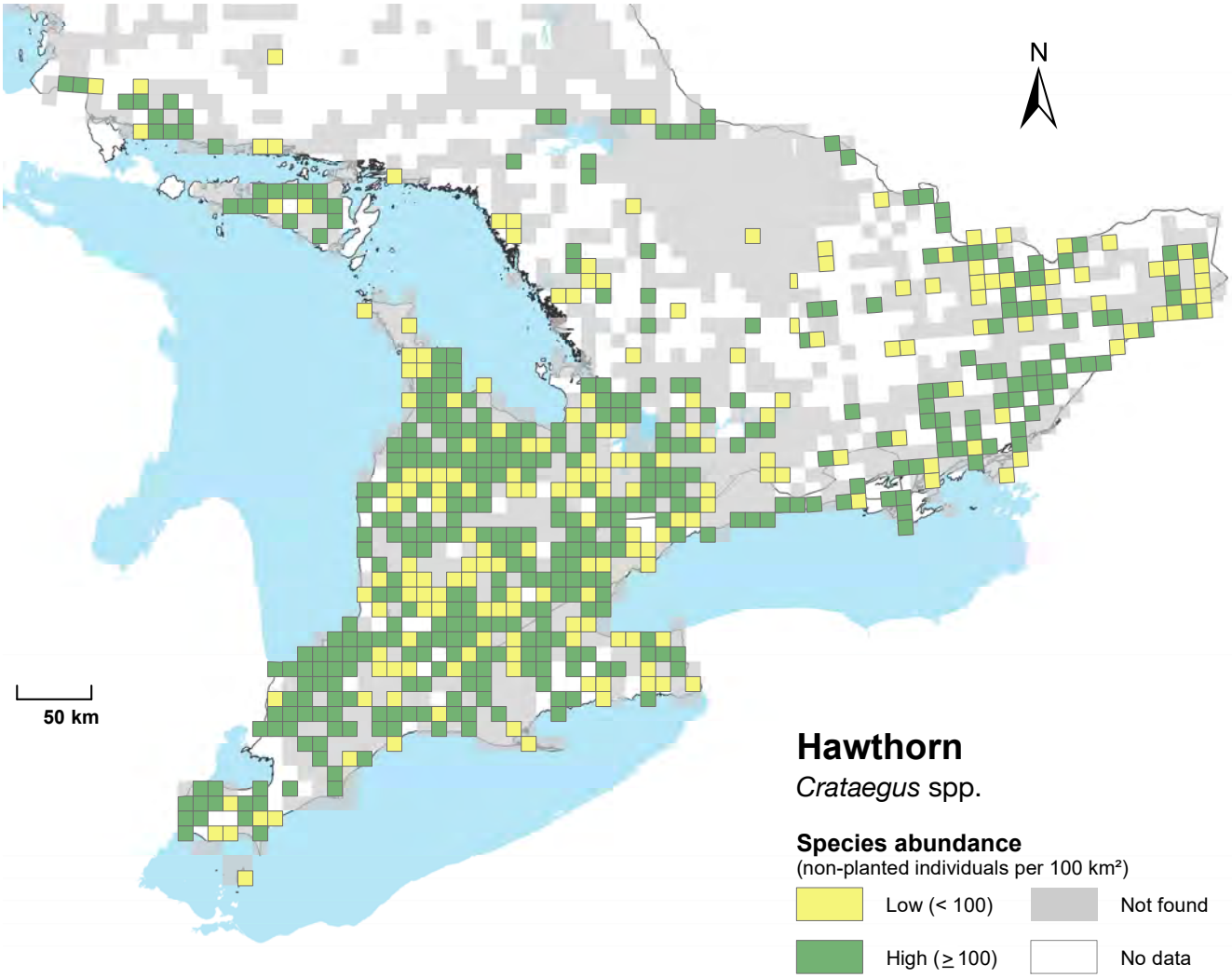
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	23%
	Regional Total (Sum)	36%
Deciduous	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	43%
	Regional Total (Sum)	60%
% Survey squares occupied (Provincial total)		31%



Hawthorn | Aubépine

Crataegus spp.

The reported distribution and abundance of hawthorn species in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

American beech | Hêtre à grandes feuilles

Fagus grandifolia

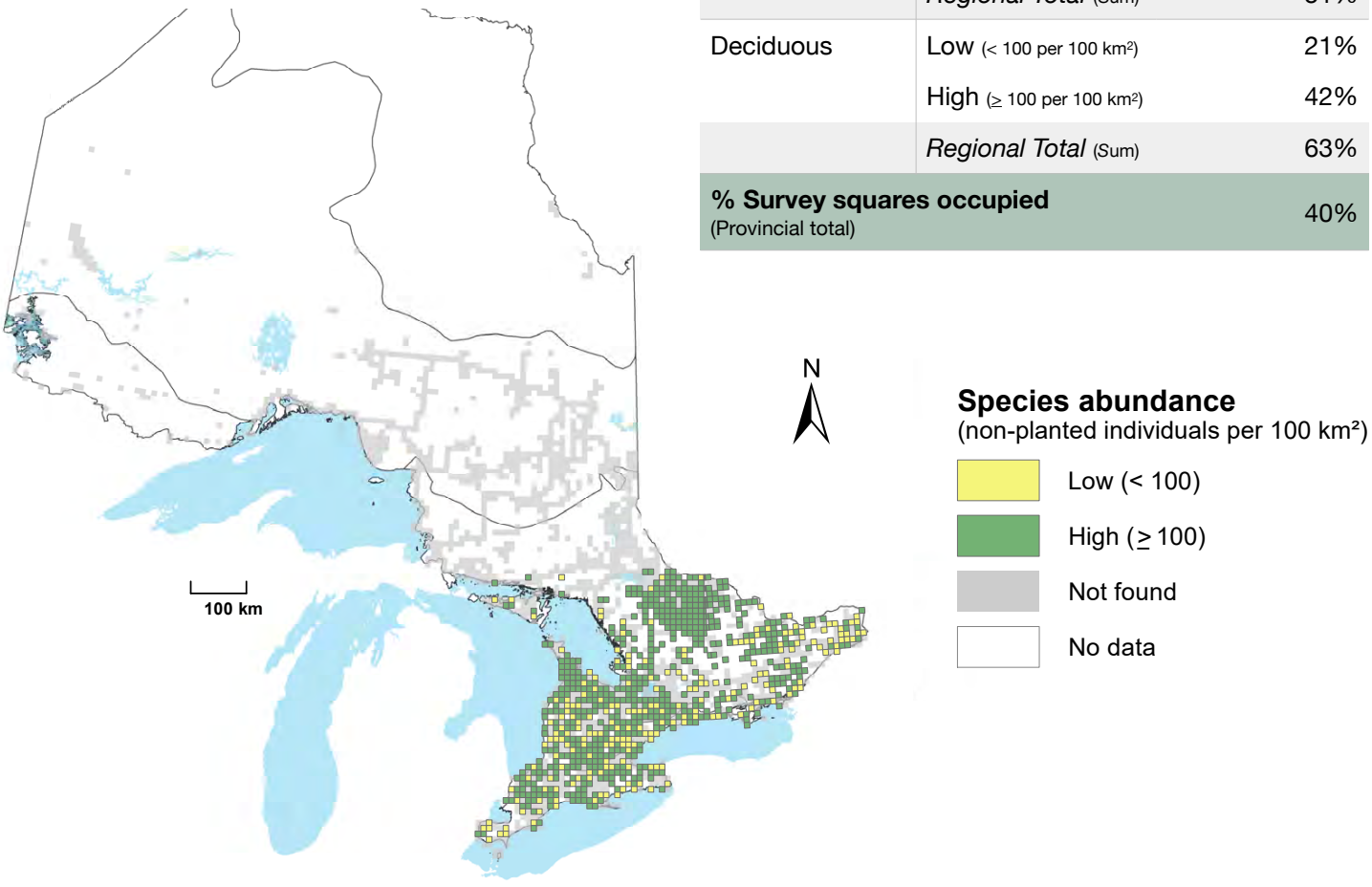
Native to Ontario

Reported distribution: The distribution of American beech was observed to be relatively continuous in survey squares below about 46°N. American beech was identified in the majority of squares in the Great Lakes - St. Lawrence and deciduous forest regions, but was entirely absent from the boreal forest region.

Reported abundance: Within its range, American beech grew most commonly at high abundance (≥ 100 individuals). American beech was frequently encountered within its geographic range. Populations are now declining due in part to infection from beech bark disease and the vector, wooly beech scale.

Table 47 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

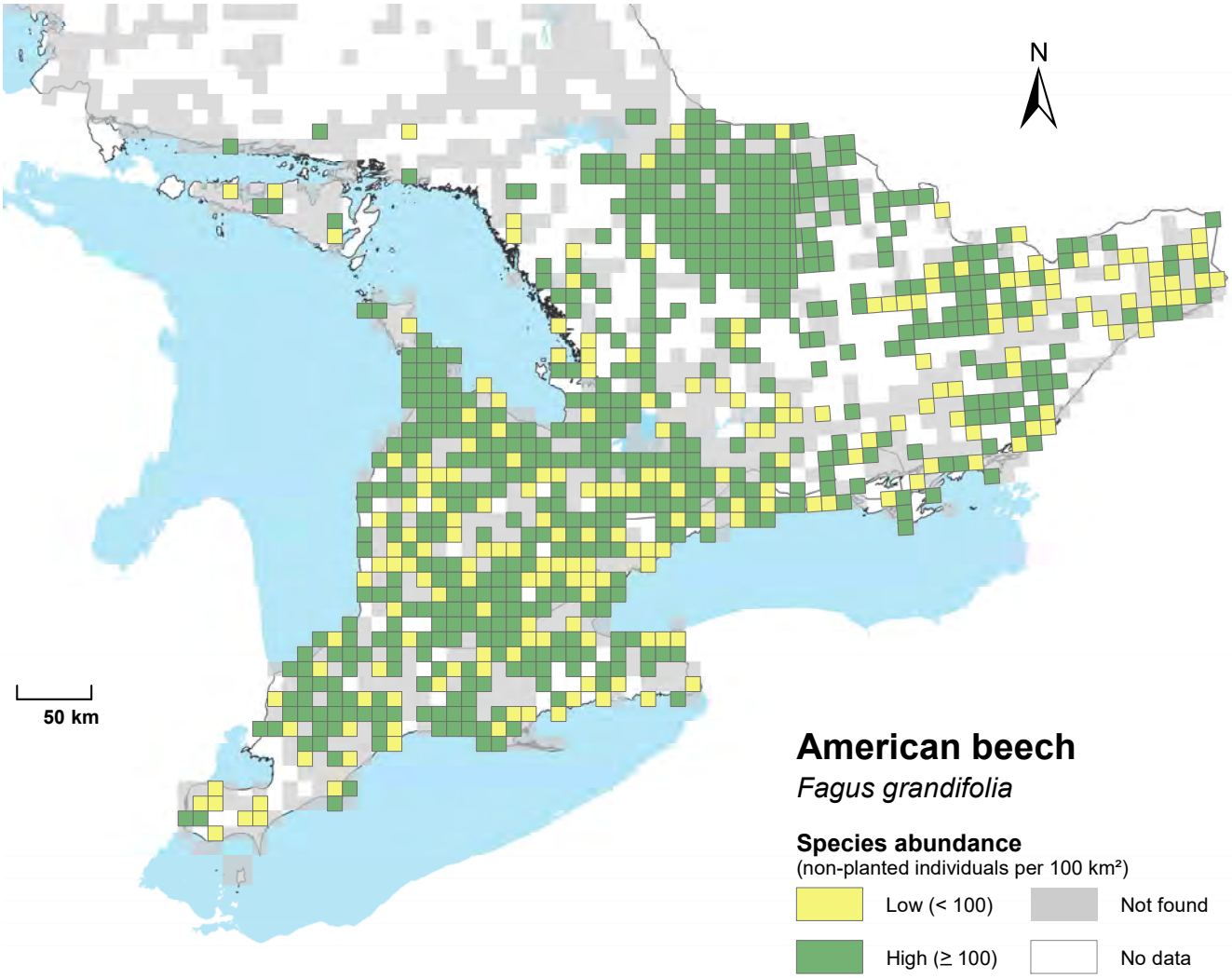
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	39%
	Regional Total (Sum)	51%
Deciduous	Low (< 100 per 100 km²)	21%
	High (≥ 100 per 100 km²)	42%
	Regional Total (Sum)	63%
% Survey squares occupied (Provincial total)		40%



American beech | Hêtre à grande feuilles

Fagus grandifolia

The reported distribution and abundance of American beech in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Glossy buckthorn | Nerprun bourdaine

Frangula alnus

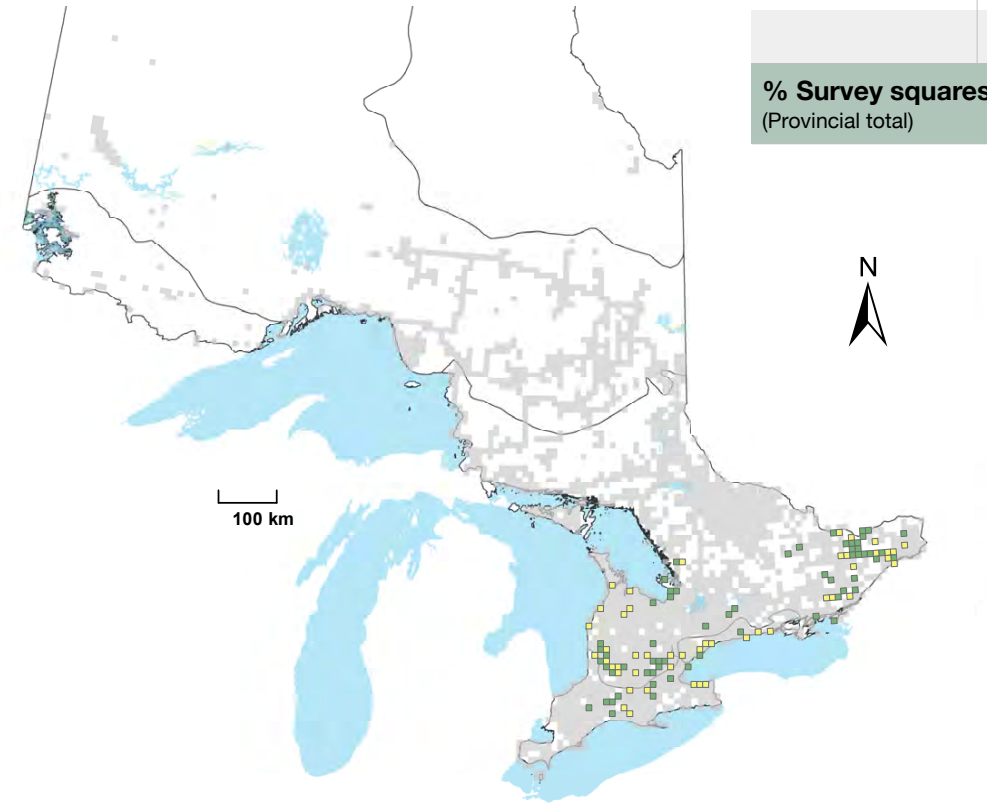
Introduced to Ontario

Reported distribution: Glossy buckthorn is an invasive species in Ontario and was found to have a somewhat discontinuous distribution throughout southern Ontario. The species was most commonly encountered in the deciduous and Great Lakes - St. Lawrence forest regions (9% and 7% of squares occupied, respectively). Glossy buckthorn frequently occupied survey squares in and around highly populated, urban areas of the province.

Reported abundance: Glossy buckthorn had a low to moderate abundance in Ontario. However, its ability to establish at high levels of abundance (≥ 100 individuals) near populated areas is indicative of its ability to naturalize throughout southern Ontario.

Table 48 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

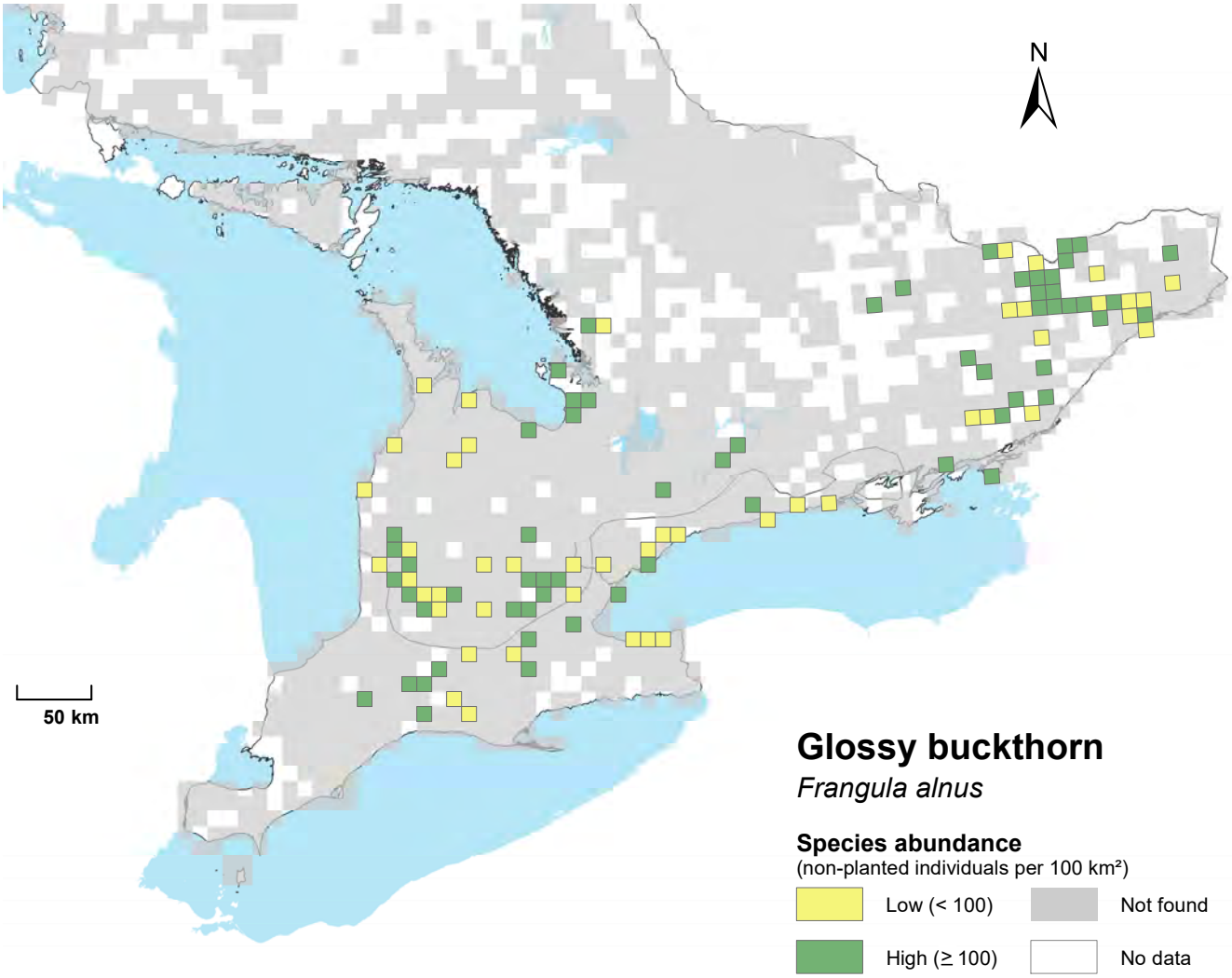
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	7%
Deciduous	Low (< 100 per 100 km²)	5%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	9%
% Survey squares occupied (Provincial total)		6%



Glossy buckthorn | Nerprun bourdaine

Frangula alnus

The reported distribution and abundance of glossy buckthorn in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

White ash | Frêne blanc

Fraxinus americana

Native to Ontario

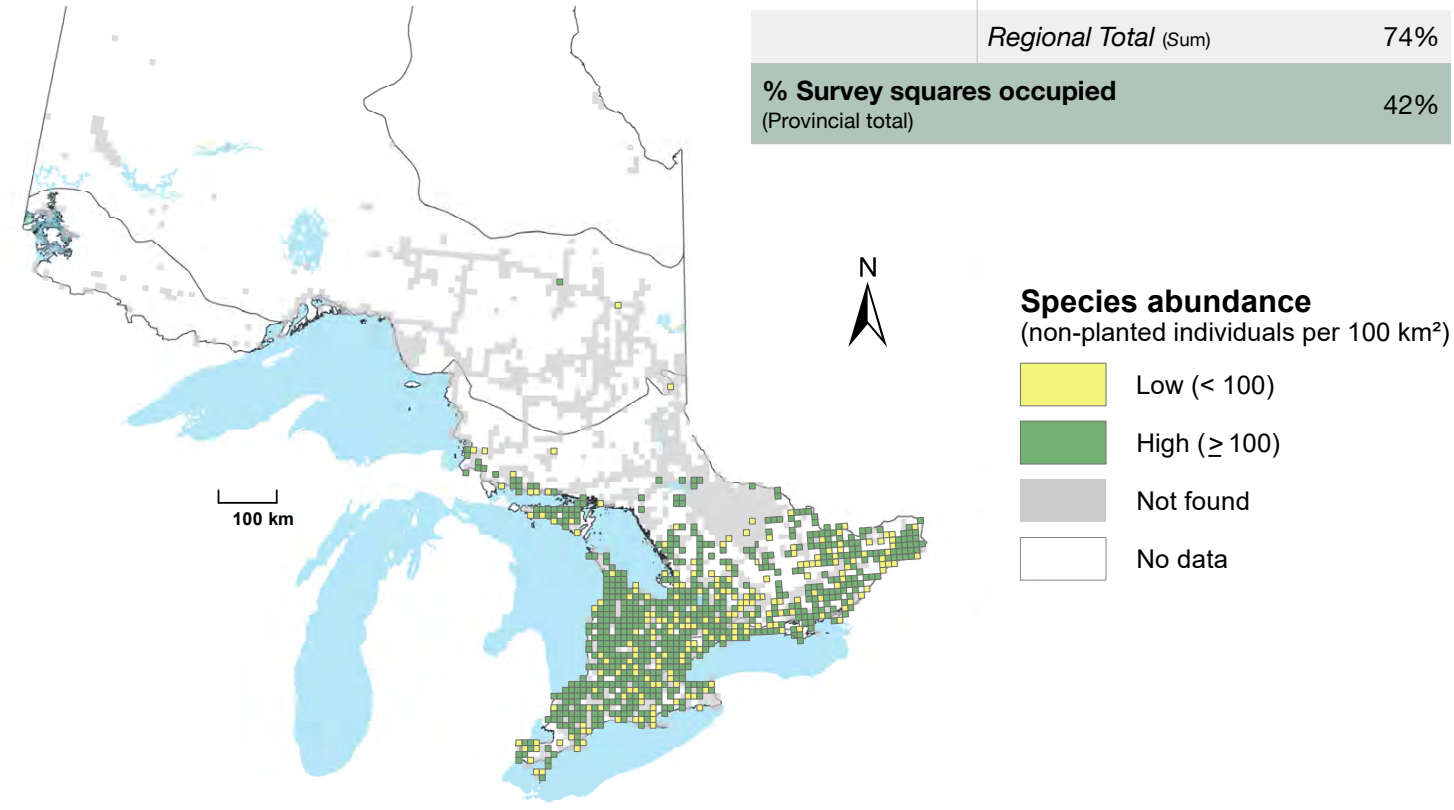
Reported distribution: The distribution of white ash was limited to areas below about 47°N latitude. The species was commonly observed throughout southern Ontario, although its distribution was more sporadic in the northern portion of its range.

Reported abundance: Within its range, white ash tended to grow at high abundance (≥ 100 individuals). White ash was grew at high abundance in 40% and 54% of squares surveyed in the Great Lakes - St. Lawrence and deciduous forest regions.

The provincial population of white ash has been significantly impacted by the arrival of the emerald ash borer since the Tree Atlas surveys were conducted.

Table 49 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

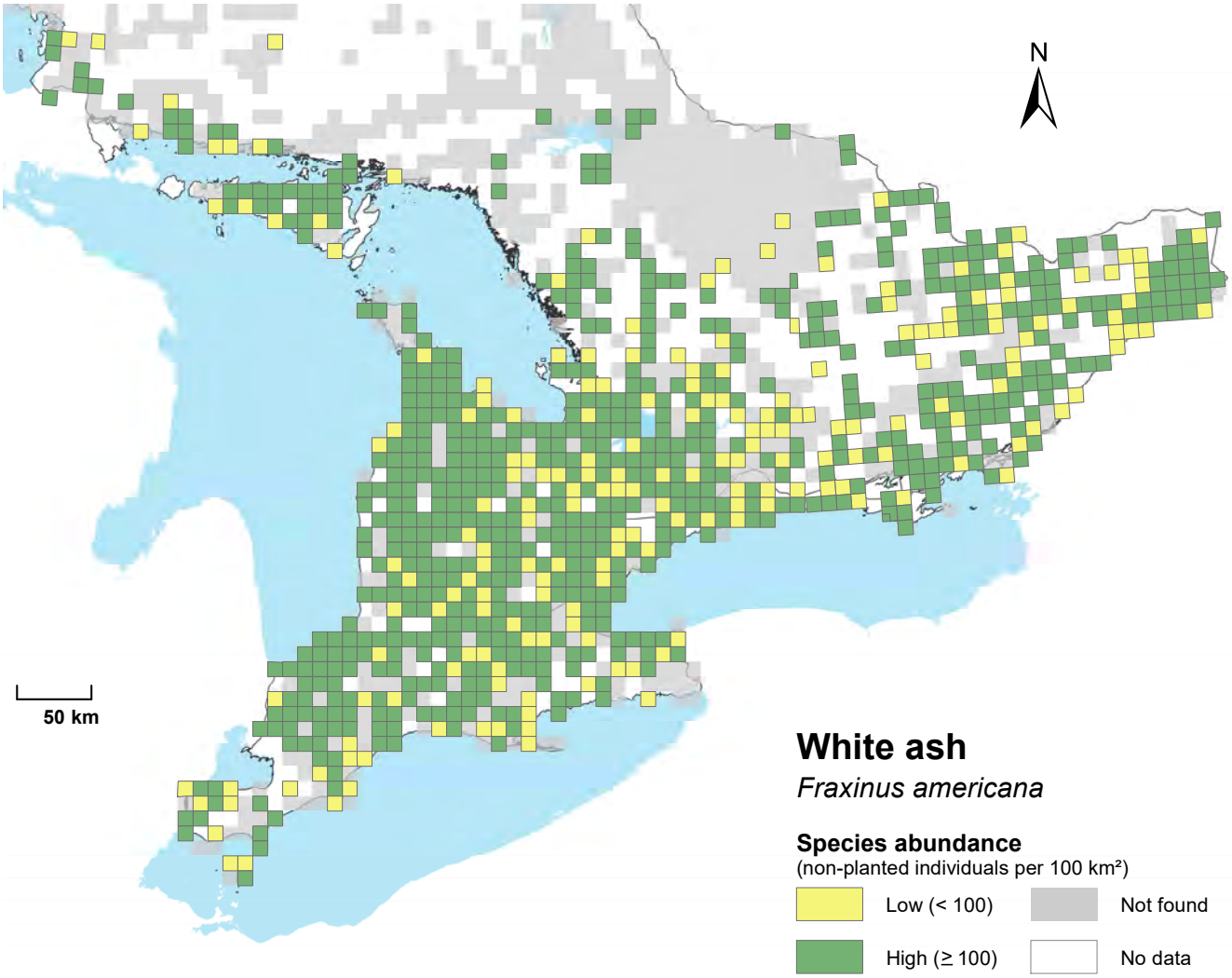
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	40%
	Regional Total (Sum)	52%
Deciduous	Low (< 100 per 100 km²)	20%
	High (≥ 100 per 100 km²)	54%
	Regional Total (Sum)	74%
% Survey squares occupied (Provincial total)		42%



White ash | Frêne blanc

Fraxinus americana

The reported distribution and abundance of white ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Black ash | Frêne noir

Fraxinus nigra

Native to Ontario

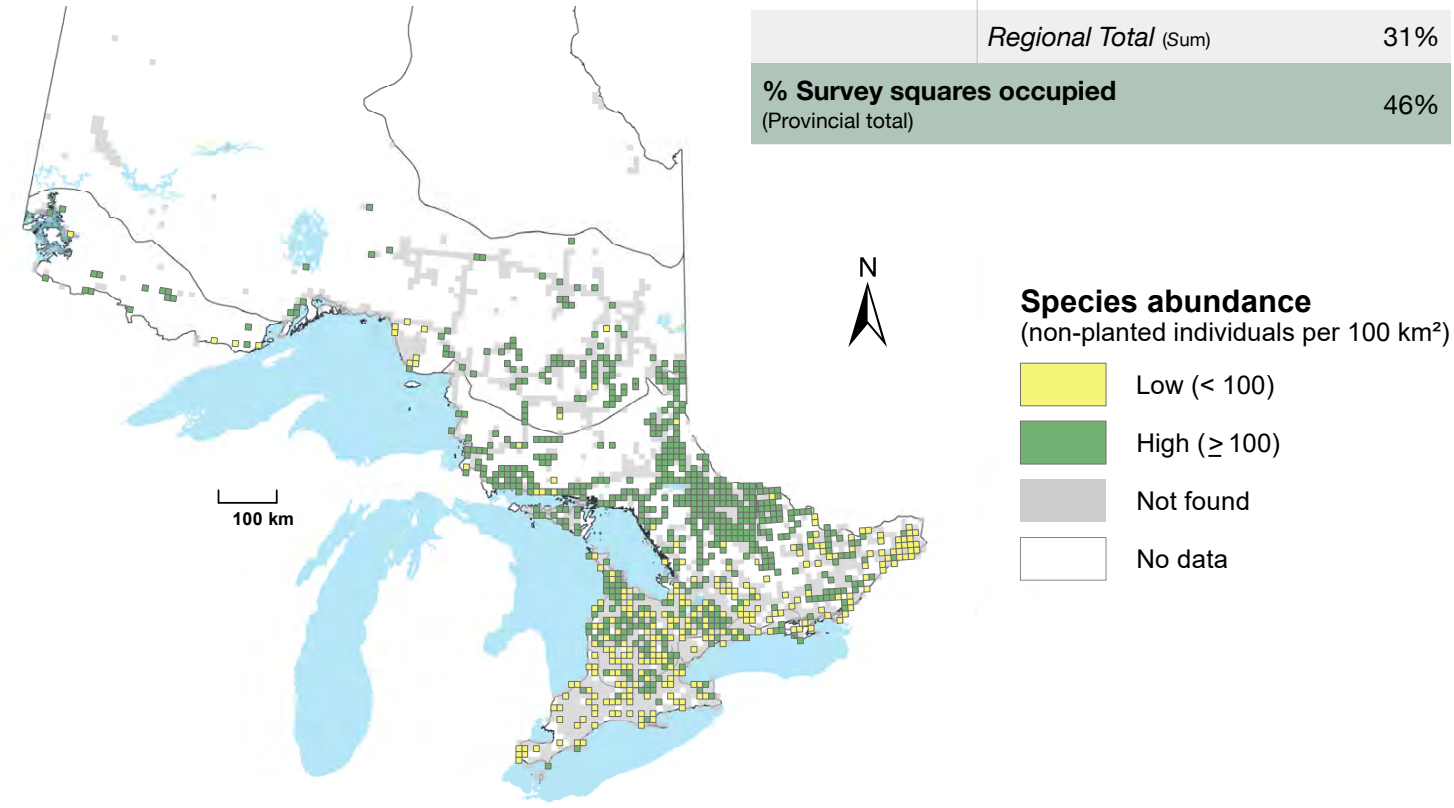
Reported distribution: Black ash had a widespread distribution throughout Ontario and the species was observed in the three southern-most forest regions. The distribution of black ash was most continuous in the Great Lakes - St. Lawrence forest region, where it occupied 59% of surveyed squares.

Reported abundance: Black ash was observed to have a high provincial abundance due to its widespread distribution and tendency to grow at high abundance in the northern portion of its range.

The provincial population of black ash has been significantly impacted by the arrival of the emerald ash borer since the Tree Atlas surveys were conducted.

Table 50 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

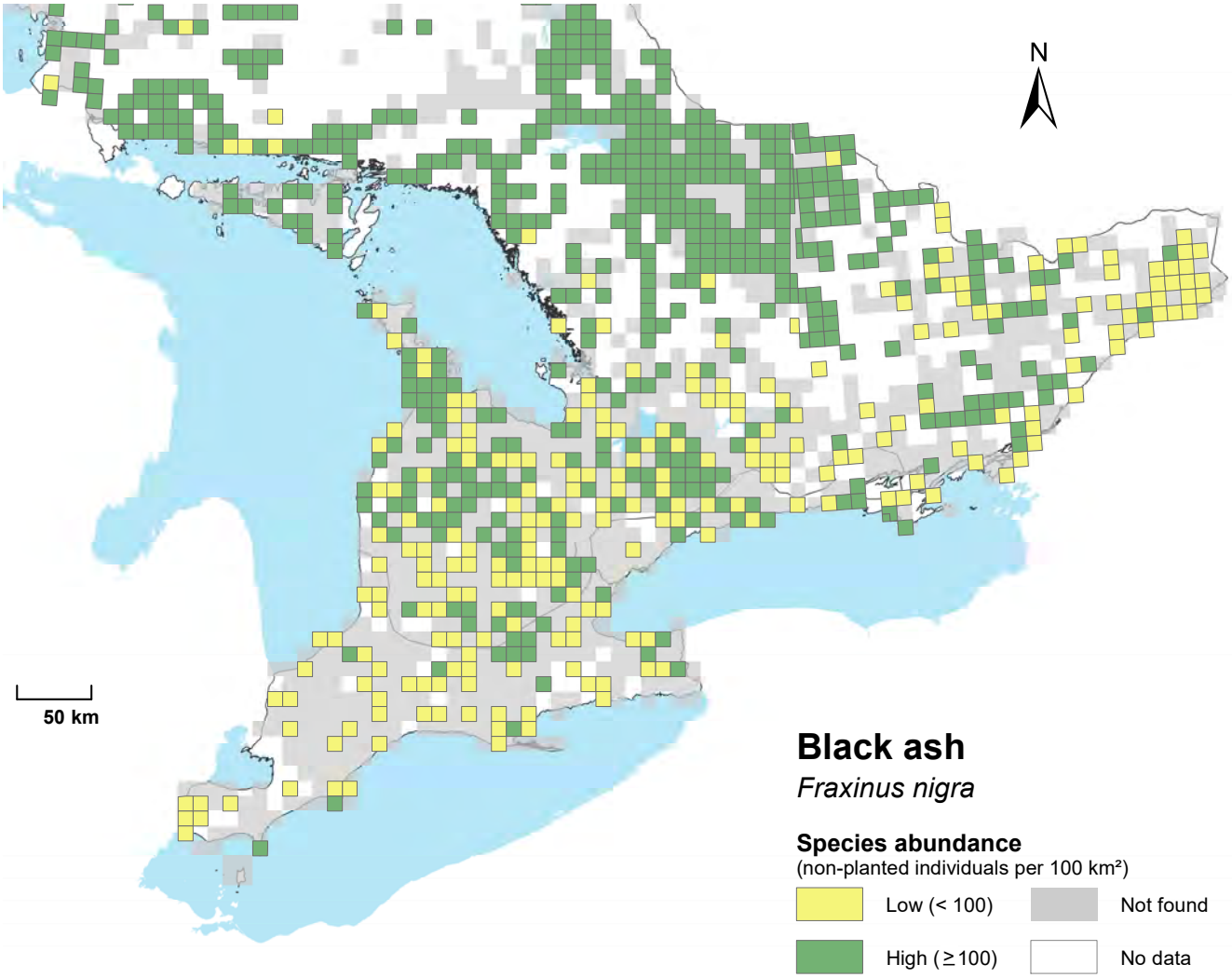
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	21%
	Regional Total (Sum)	23%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	15%
	High (≥ 100 per 100 km²)	44%
	Regional Total (Sum)	59%
Deciduous	Low (< 100 per 100 km²)	23%
	High (≥ 100 per 100 km²)	8%
	Regional Total (Sum)	31%
% Survey squares occupied (Provincial total)		46%



Black ash | Frêne noir

Fraxinus nigra

The reported distribution and abundance of black ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Red ash | Frêne rouge

Fraxinus pennsylvanica

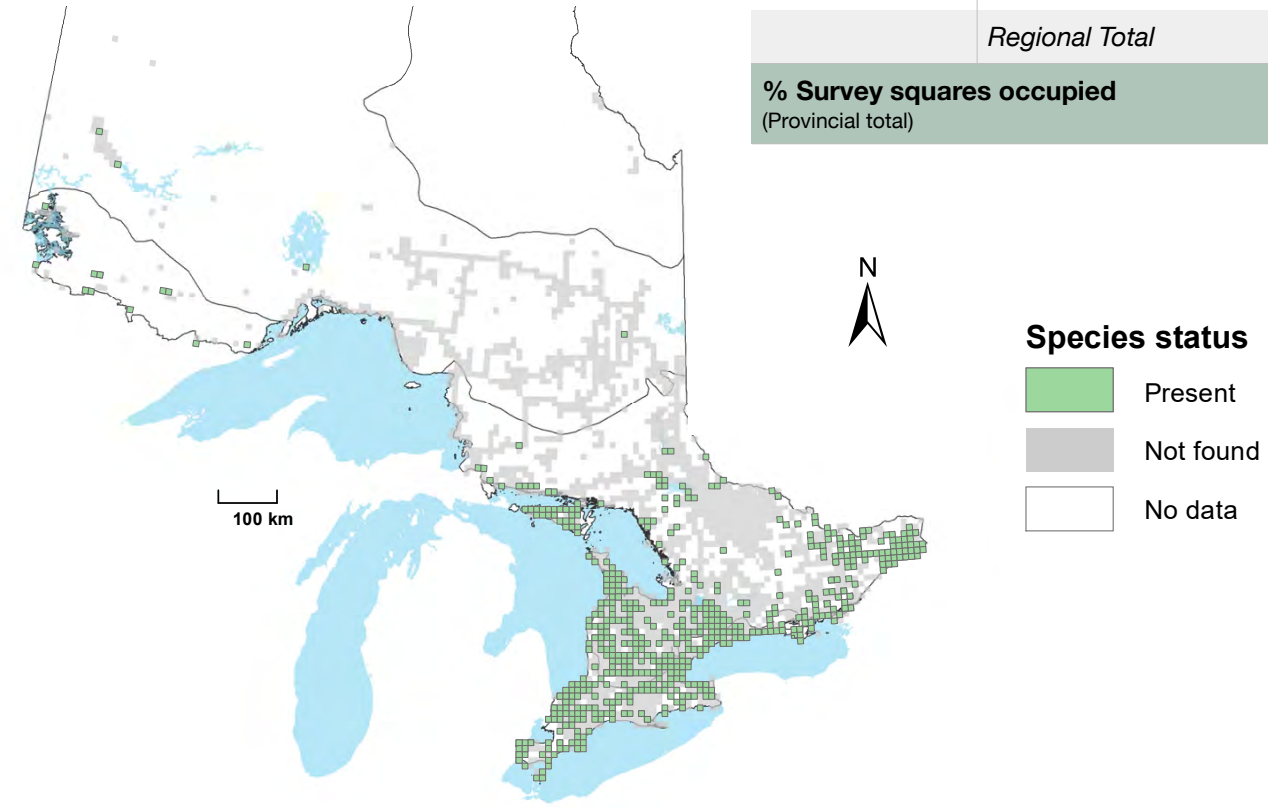
Native to Ontario

Reported distribution: During original surveying efforts, separate reports were recorded for red ash (*F. pennsylvanica* var. *pennsylvanica*) and green ash (*F. pennsylvanica* var. *subintegerrima*). At time of publication, these varieties are no longer separated by most taxonomists, and are grouped as red ash. We therefore present reports for both on one map to reflect the distribution of the species as a whole. Thus. red ash was mainly found in the deciduous and Great Lakes - St. Lawrence forest regions below 47°N latitude, though occasionally observed in the boreal forest region.

Reported abundance: Red ash grew most frequently at high abundance. The population of red ash has been significantly impacted by the emerald ash borer.

Table 51 The reported distribution of non-planted individuals in each forest region, and across the province. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

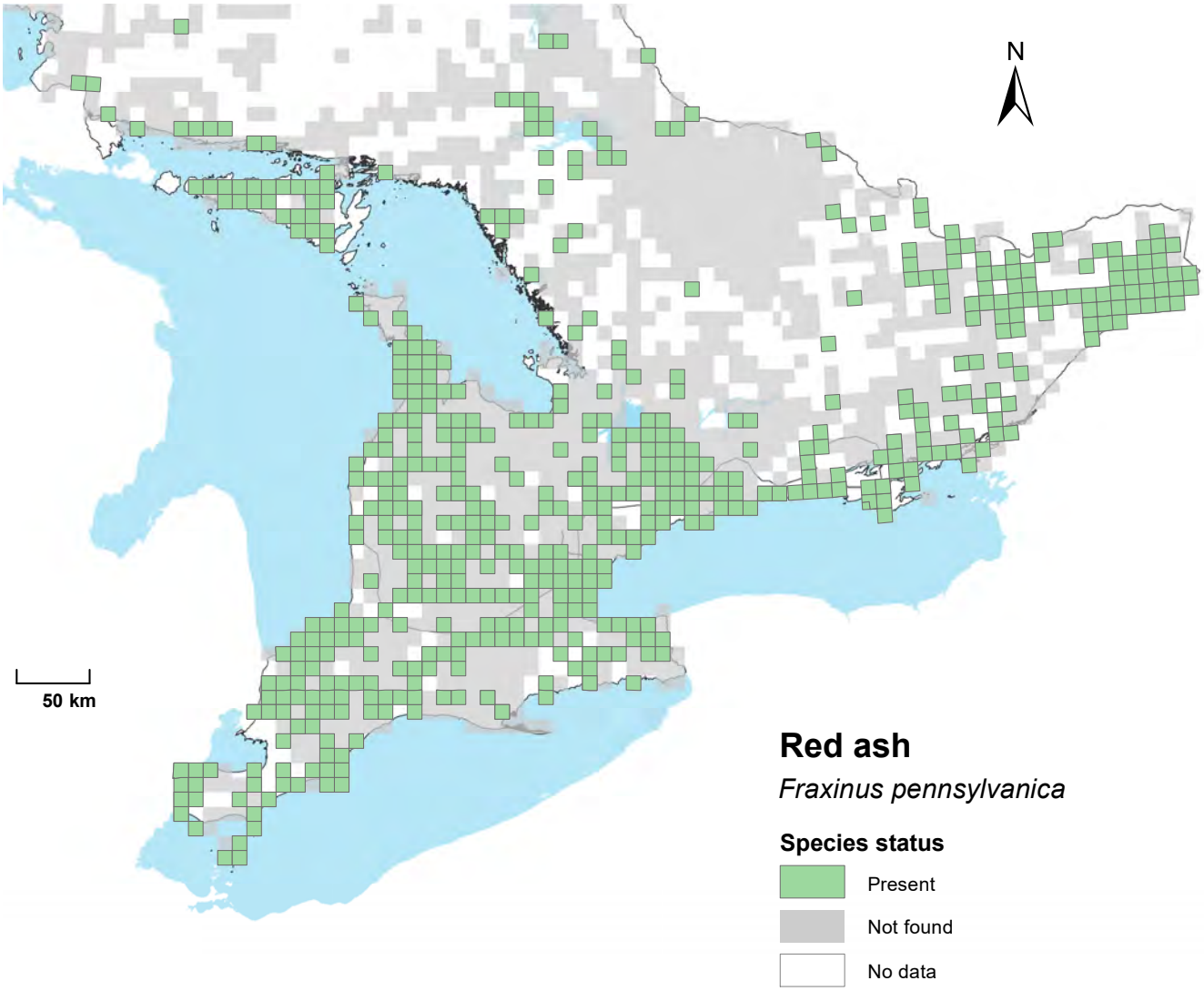
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	30%
Deciduous	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	58%
% Survey squares occupied (Provincial total)		27%



Red ash | Frêne rouge

Fraxinus pennsylvanica

The reported distribution of red ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Pumpkin ash | Frêne pubescent

Fraxinus profunda

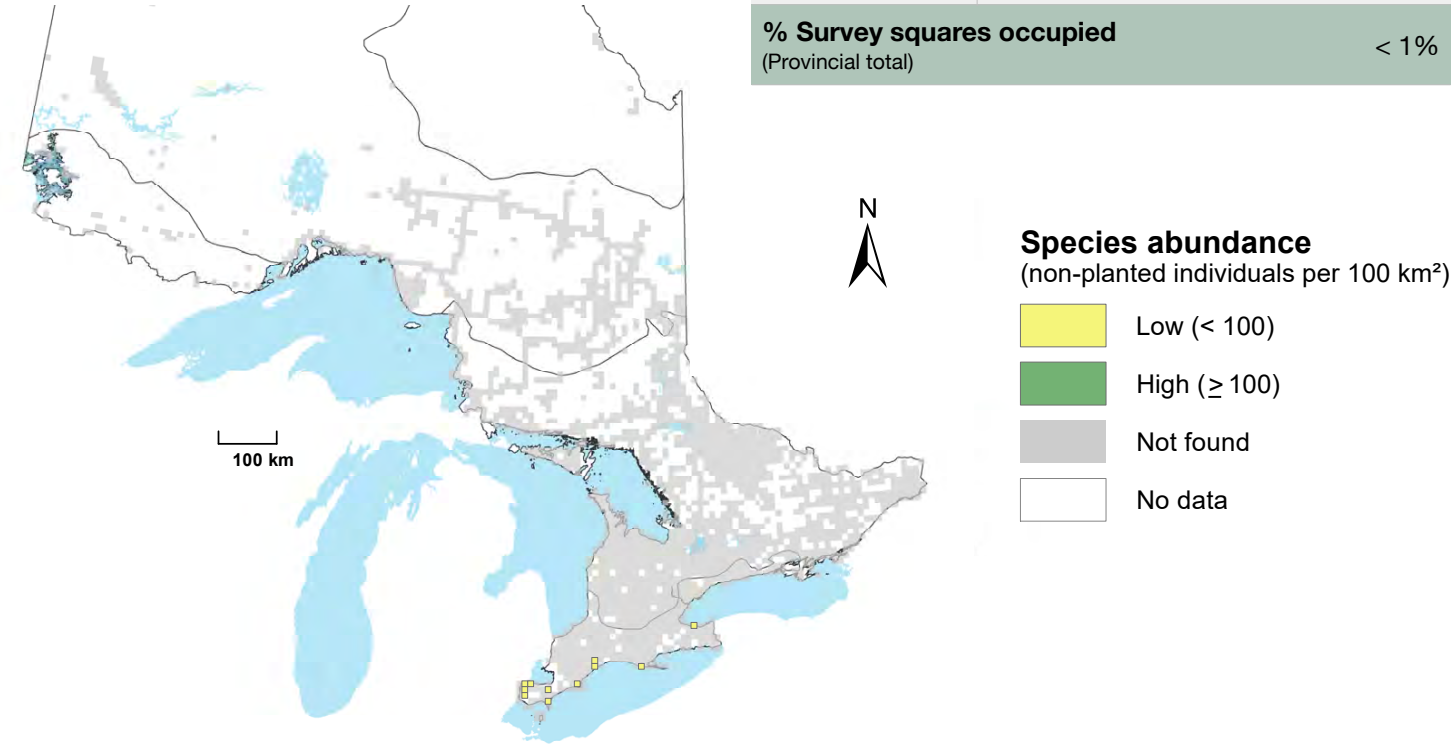
Native to Ontario

Reported distribution: Pumpkin ash had a very limited and patchy distribution and was observed only in the southwest of the province. With pumpkin ash first recognized in Ontario in 1992, and Tree Atlas surveys in the late 1990s, there is a possibility that it was initially overlooked or assumed to be white or green ash. Unfortunately, emerald ash borer arrived in Ontario shortly after discovery and quickly decimated populations just as field botanists were beginning to understand their distribution. Large individuals are now absent from most of the squares where this species was reported in the 1990s.

Reported abundance: Where identified, pumpkin ash was observed only at low abundance (<100 individuals). Due to severe decline from emerald ash borer, surviving individuals are critical for conservation and restoration efforts.

Table 52 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

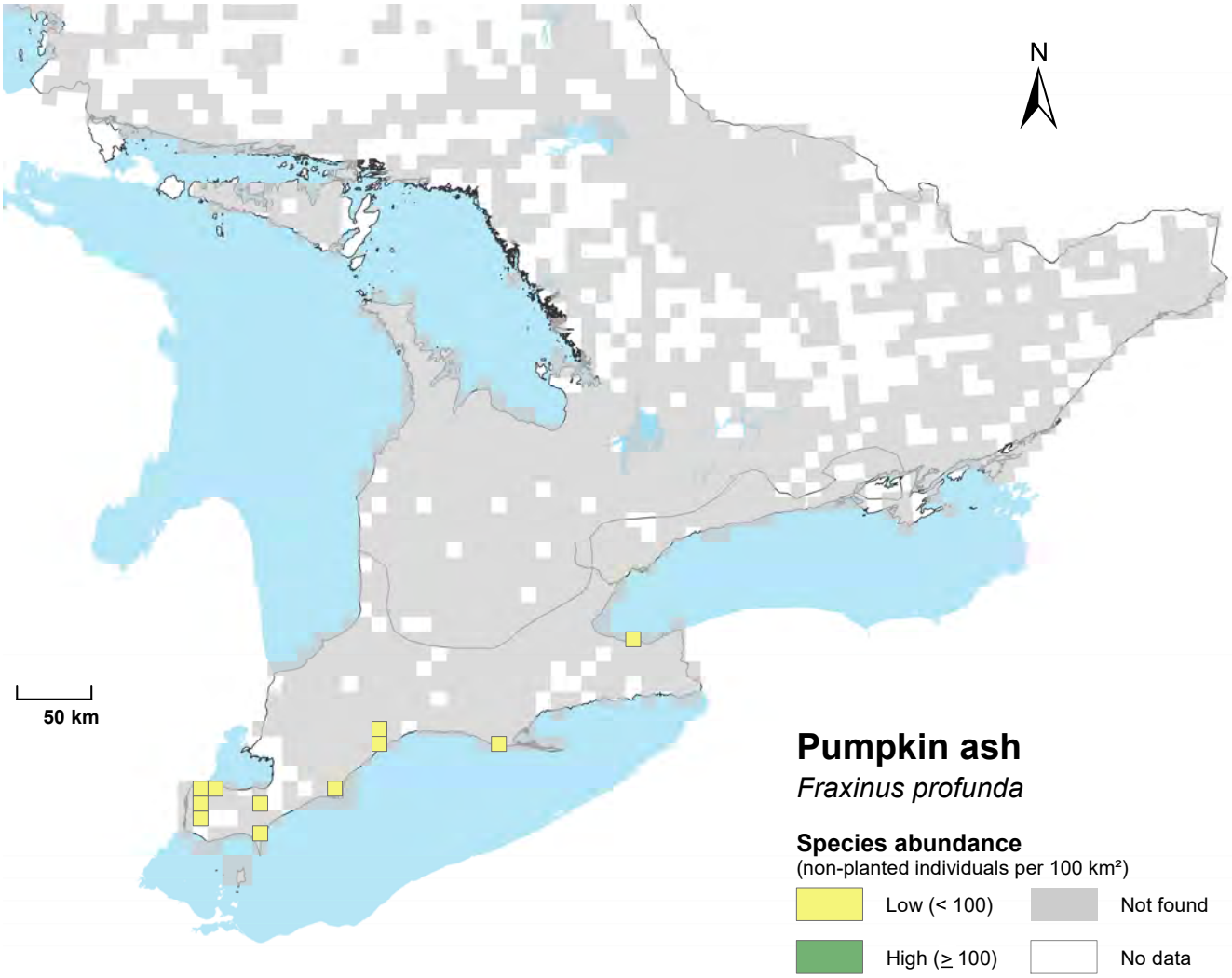
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	4%
% Survey squares occupied (Provincial total)		< 1%



Pumpkin ash | Frêne pubescent

Fraxinus profunda

The reported distribution and abundance of pumpkin ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Blue ash | Frêne bleu

Fraxinus quadrangulata

Native to Ontario

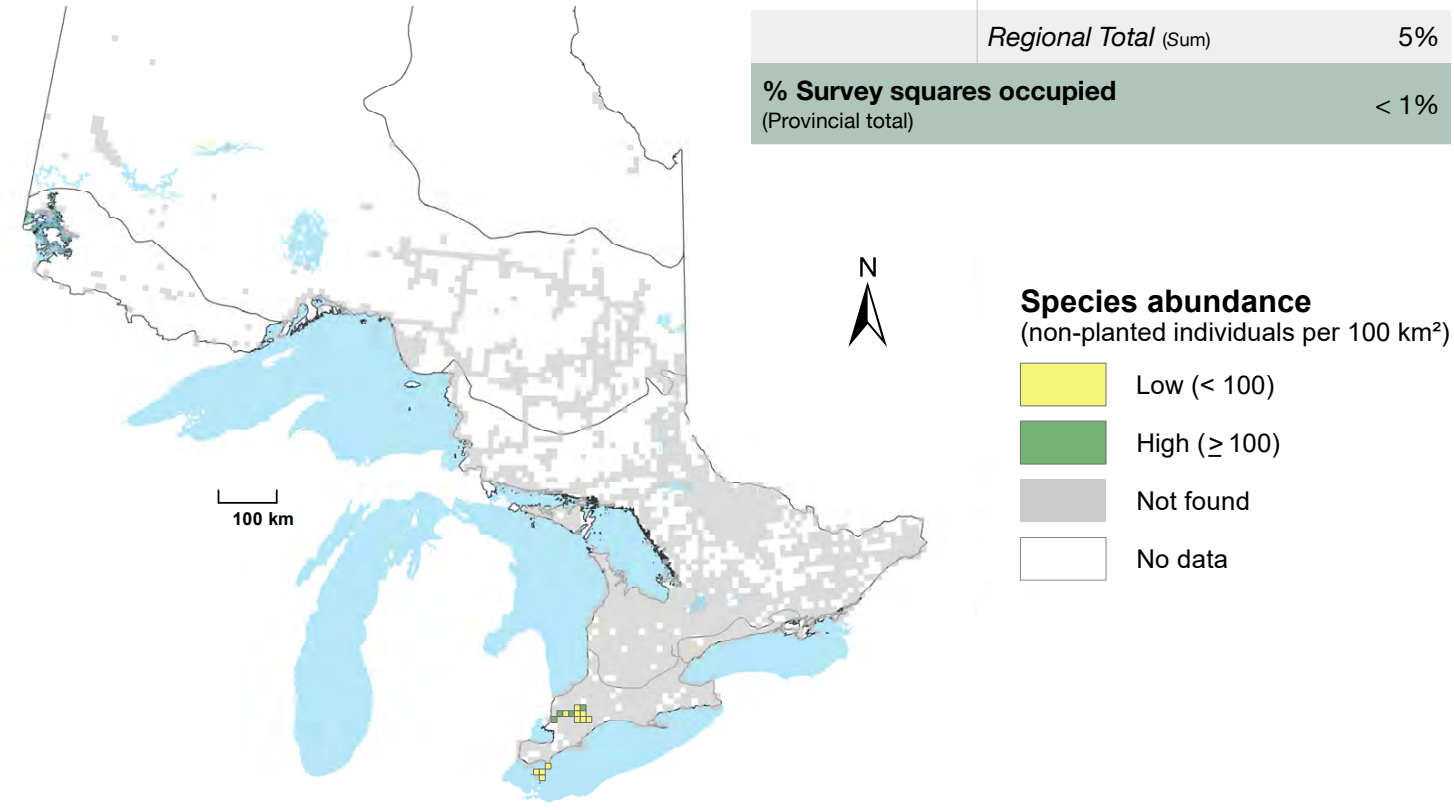
Reported distribution: Blue ash had a very limited distribution in the province and were observed in only two clusters of survey squares in southwestern Ontario.

Reported abundance: Blue ash were most commonly observed growing at low abundance (< 100 individuals). Combined with their limited distribution, the low abundance of blue ash has resulted in it being listed as a threatened species in Ontario.

Blue ash is the least preferred of our native ash species to feeding by emerald ash borer. Healthy trees remain in areas where all other mature individuals of other ash species have been eliminated. However, weak and stressed individuals can still be overwhelmed and lost from heavy infestations.

Table 53 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

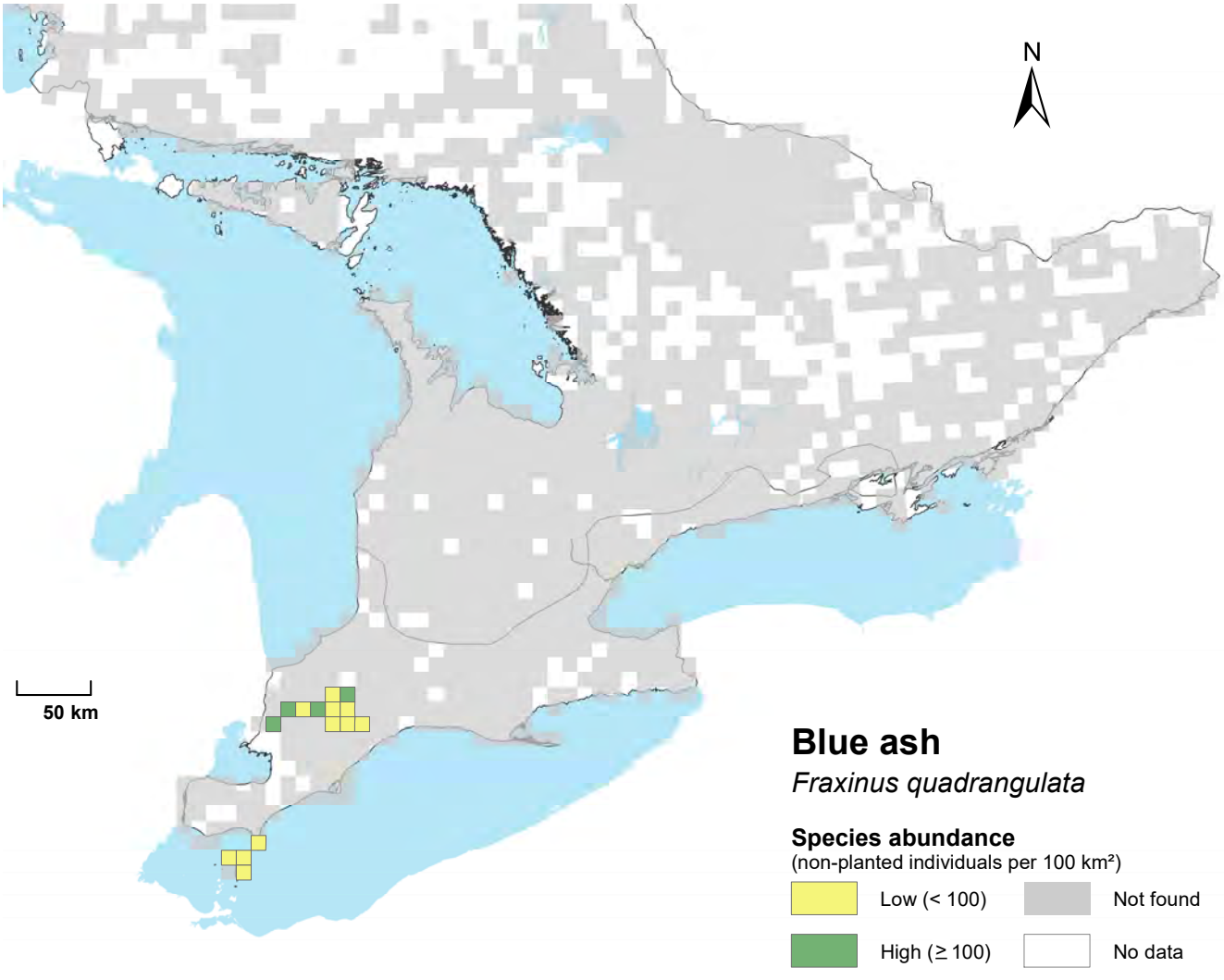
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	5%
% Survey squares occupied (Provincial total)		< 1%



Blue ash | Frêne bleu

Fraxinus quadrangulata

The reported distribution and abundance of blue ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Honey-locust | Févier épineux

Gleditsia triacanthos

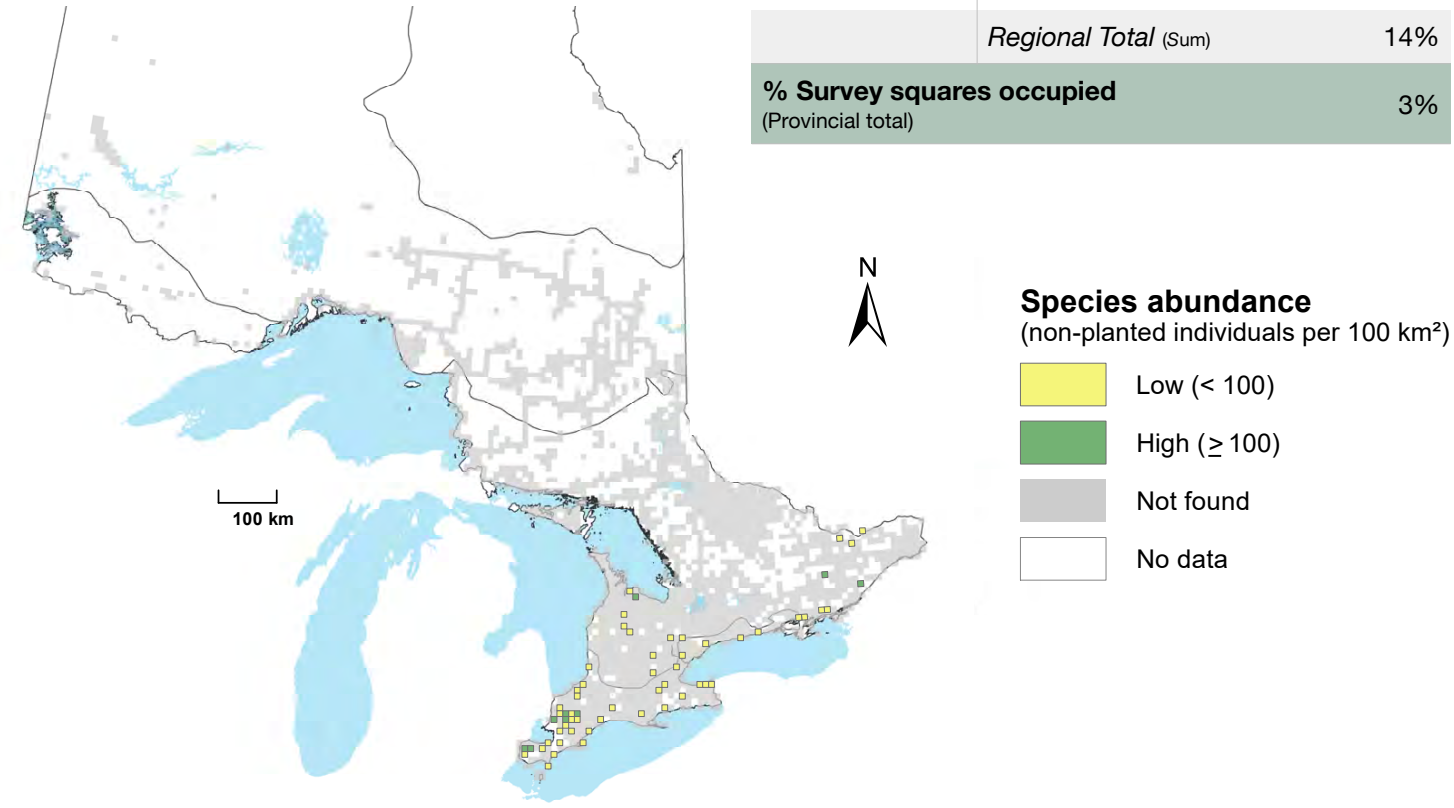
Native to Ontario

Reported distribution: Honey-locust had a patchy distribution in survey squares throughout southern Ontario. The species occupied 1% and 14% of squares surveyed in the Great Lakes - St. Lawrence and deciduous forest regions. The species was absent from the boreal forest region. The historical distribution is thought to be confined to the western portion of southwestern Ontario and the broader distribution seen today is likely a result of human planting efforts.

Reported abundance: Honey-locust grew most commonly at low abundance (< 100 individuals). Combined with their limited distribution, honey-locust can be considered to be relatively uncommon within Ontario. The species occupied 3% of the total squares surveyed.

Table 54 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

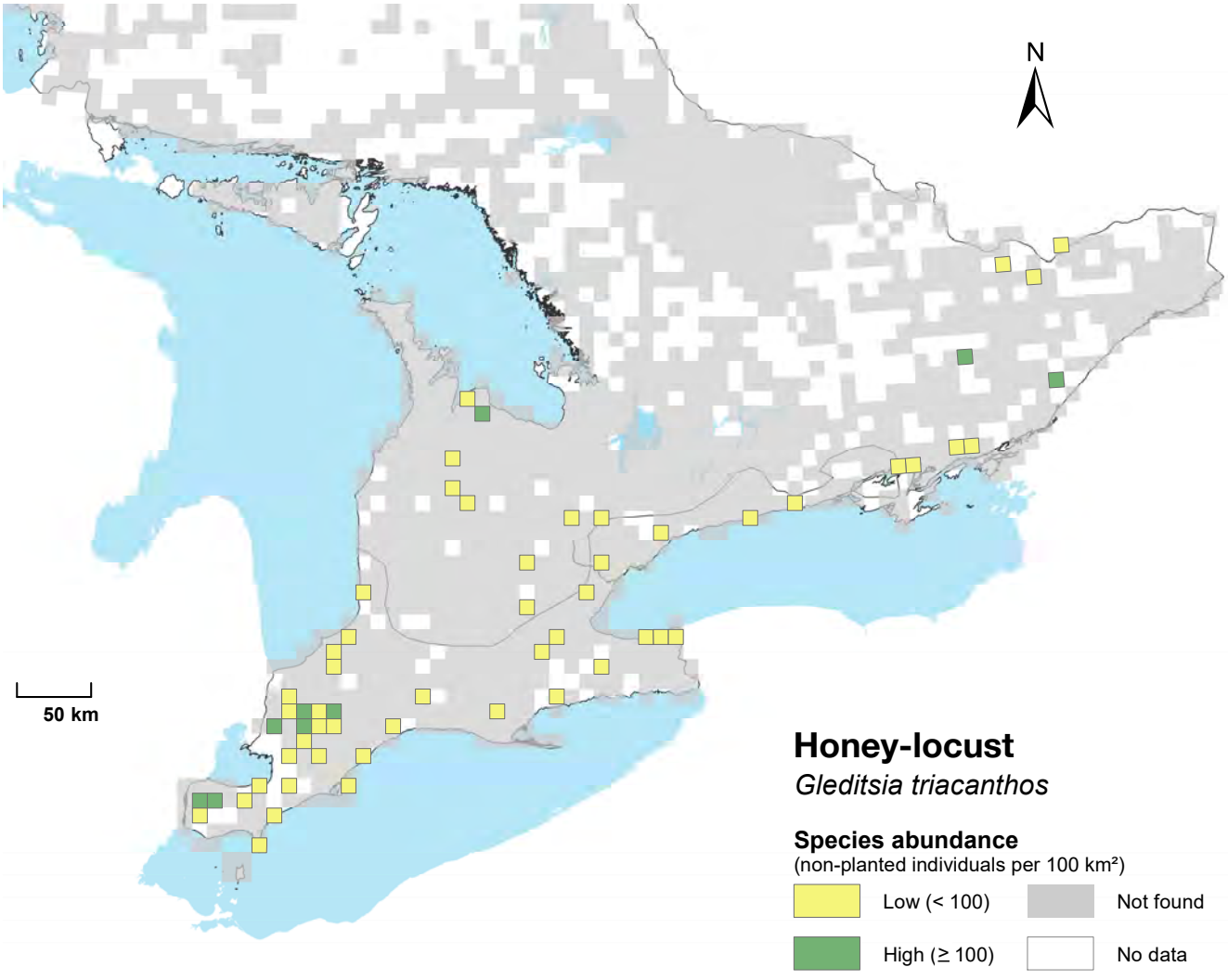
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
Deciduous	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	14%
% Survey squares occupied (Provincial total)		3%



Honey-locust | Févier épineux

Gleditsia triacanthos

The reported distribution and abundance of honey-locust in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Kentucky coffee-tree | Chicot févier

Gymnocladus dioicus

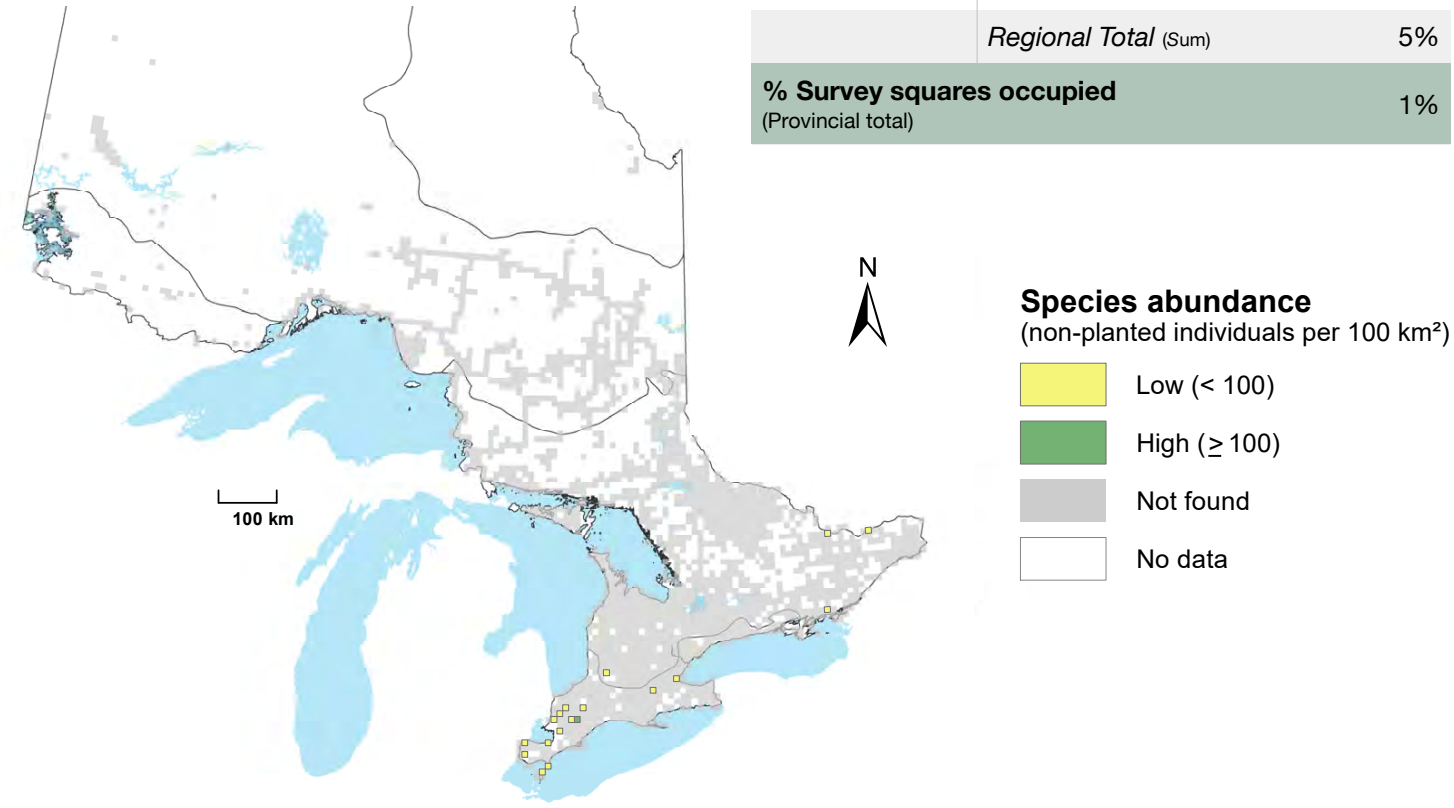
Native to Ontario

Reported distribution: Kentucky coffee-tree had a limited distribution in Ontario and was found only in the southwestern- and eastern-most regions of the province. Within its range, the species' distribution was relatively patchy, with trees frequently identified in isolated survey squares. Though based on anecdotal information, seemingly natural populations in eastern Ontario are considered to be the result of known plantings from the late 1800s. Populations in southwestern Ontario are thought to have been introduced to the province by Indigenous peoples.

Reported abundance: Kentucky coffee-tree was most commonly observed at low abundance (< 100 individuals per square). The species is listed as a threatened species in Ontario.

Table 55 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

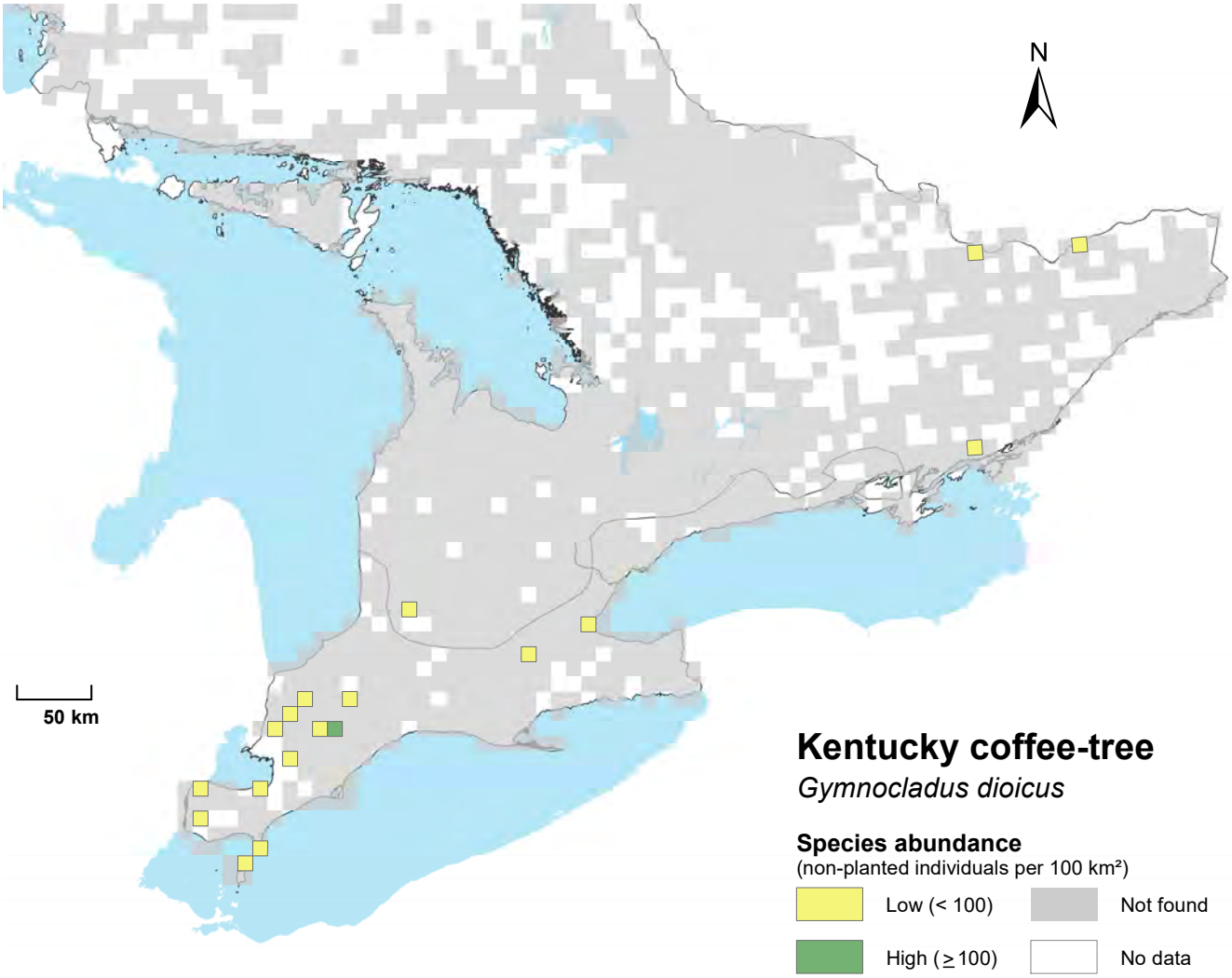
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	5%
% Survey squares occupied (Provincial total)		1%



Kentucky coffee-tree | Chicot févier

Gymnocladus dioicus

The reported distribution and abundance of Kentucky coffee-tree in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Butternut | Noyer cendré

Juglans cinerea

Native to Ontario

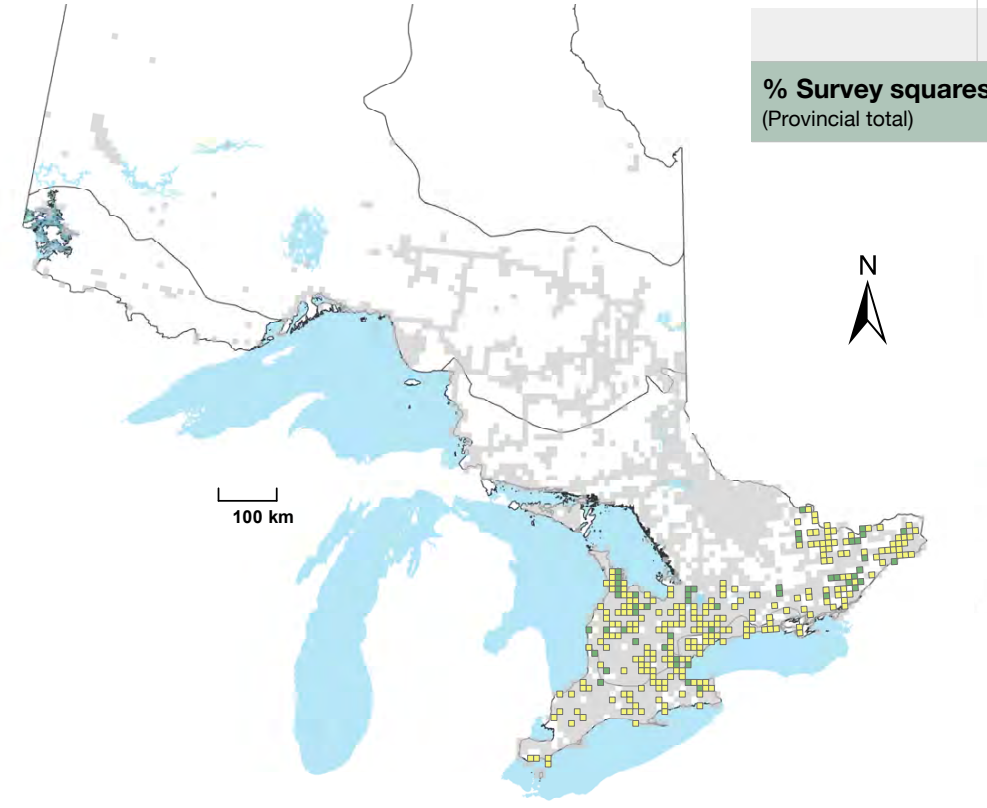
Reported distribution: Butternut was identified from the southwest to southeast of the province. The species had a somewhat patchy distribution, which was located below 45°N latitude. Butternut are now known to frequently hybridize with the introduced and widely planted Japanese walnut (heartnut), *Juglans ailantifolia.* Genetic analysis is usually required to distinguish between hybrids and the pure species.

Reported abundance: Butternuts were most often observed at low abundance (< 100 individuals).

Butternut is listed as an endangered species in Ontario due to high mortality caused by butternut canker disease. Declines in the number of butternut are known to have occurred since the Tree Atlas surveys took place.

Table 56 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

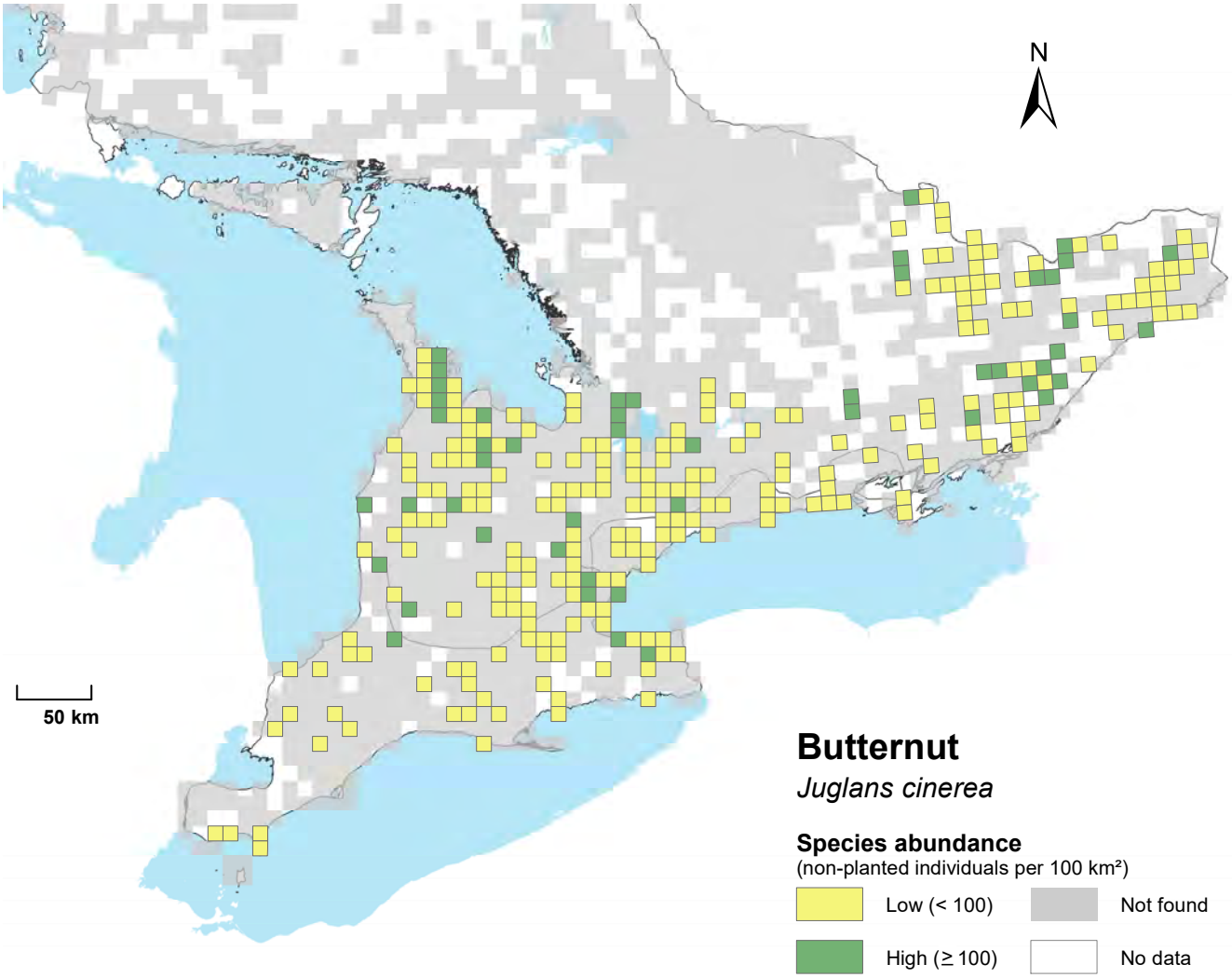
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	17%
Deciduous	Low (< 100 per 100 km²)	25%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	27%
% Survey squares occupied (Provincial total)		14%



Butternut | Noyer cendré

Juglans cinerea

The reported distribution and abundance of butternut in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Black walnut | Noyer noir

Juglans nigra

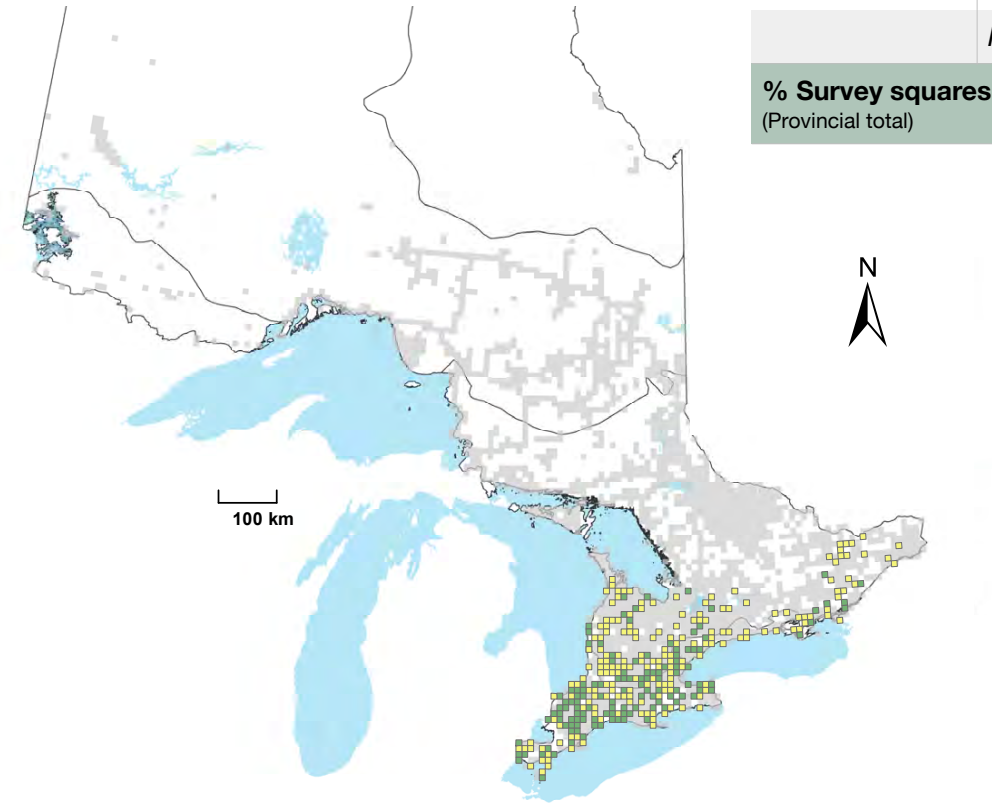
Native to Ontario

Reported distribution: Black walnut was widespread throughout southwestern and parts of eastern Ontario. The main portion of its range lay within the deciduous forest region where the species was observed in 56% of surveyed squares. The historical distribution was perhaps confined to the more western extremities of southwestern Ontario; however, provincial planting programs and seed dispersal from the also expanding range of gray squirrel (*Sciurus carolinensis*) has enabled naturalized populations to expand greatly.

Reported abundance: Black walnut was relatively common within its range, growing at high abundance (≥ 100 individuals) in about half of the survey squares in which it was identified.

Table 57 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

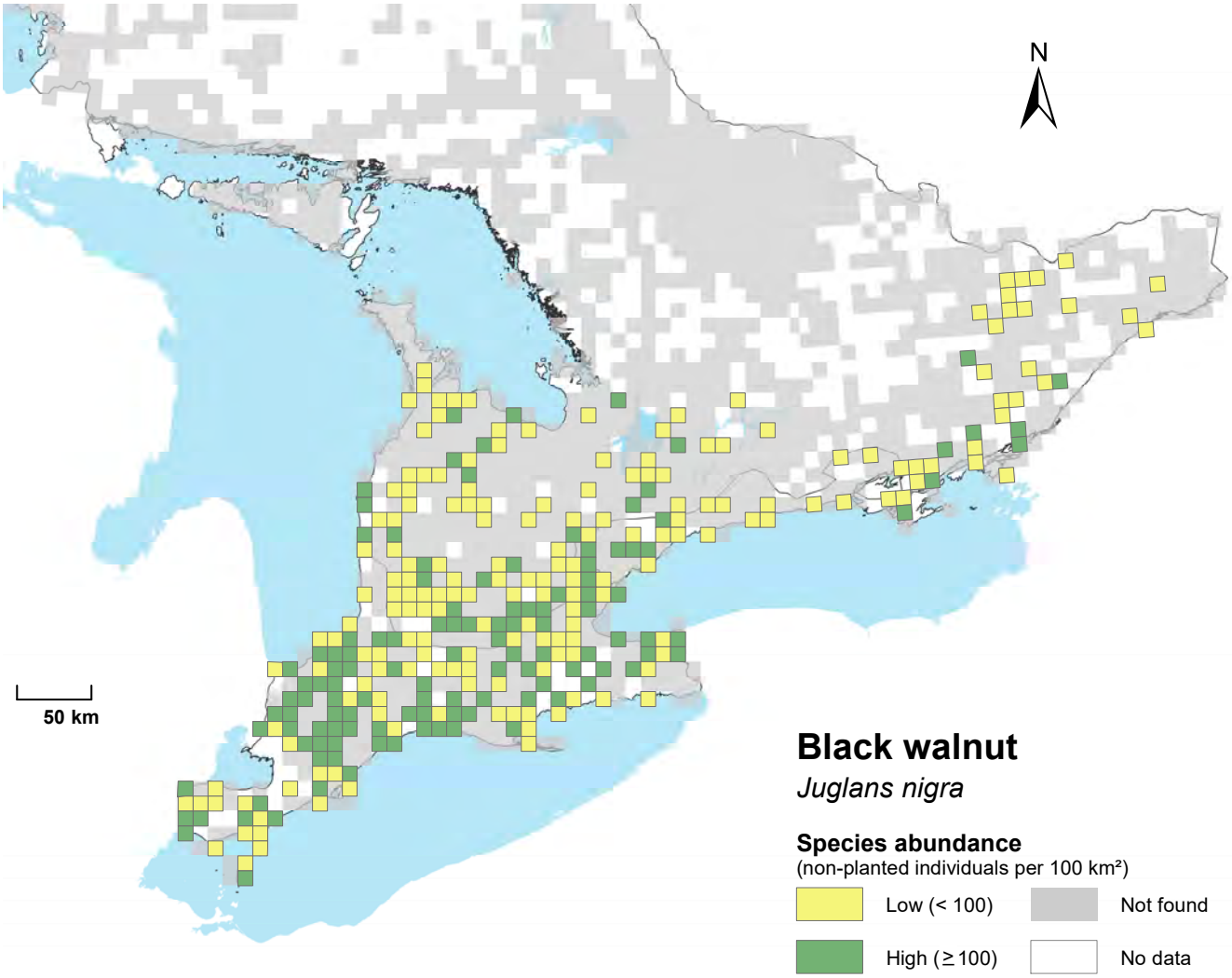
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	12%
Deciduous	Low (< 100 per 100 km²)	28%
	High (≥ 100 per 100 km²)	28%
	Regional Total (Sum)	56%
% Survey squares occupied (Provincial total)		15%



Black walnut | Noyer noir

Juglans nigra

The reported distribution and abundance of black walnut in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Tulip tree | Tulipier de Virginie

Liriodendron tulipifera

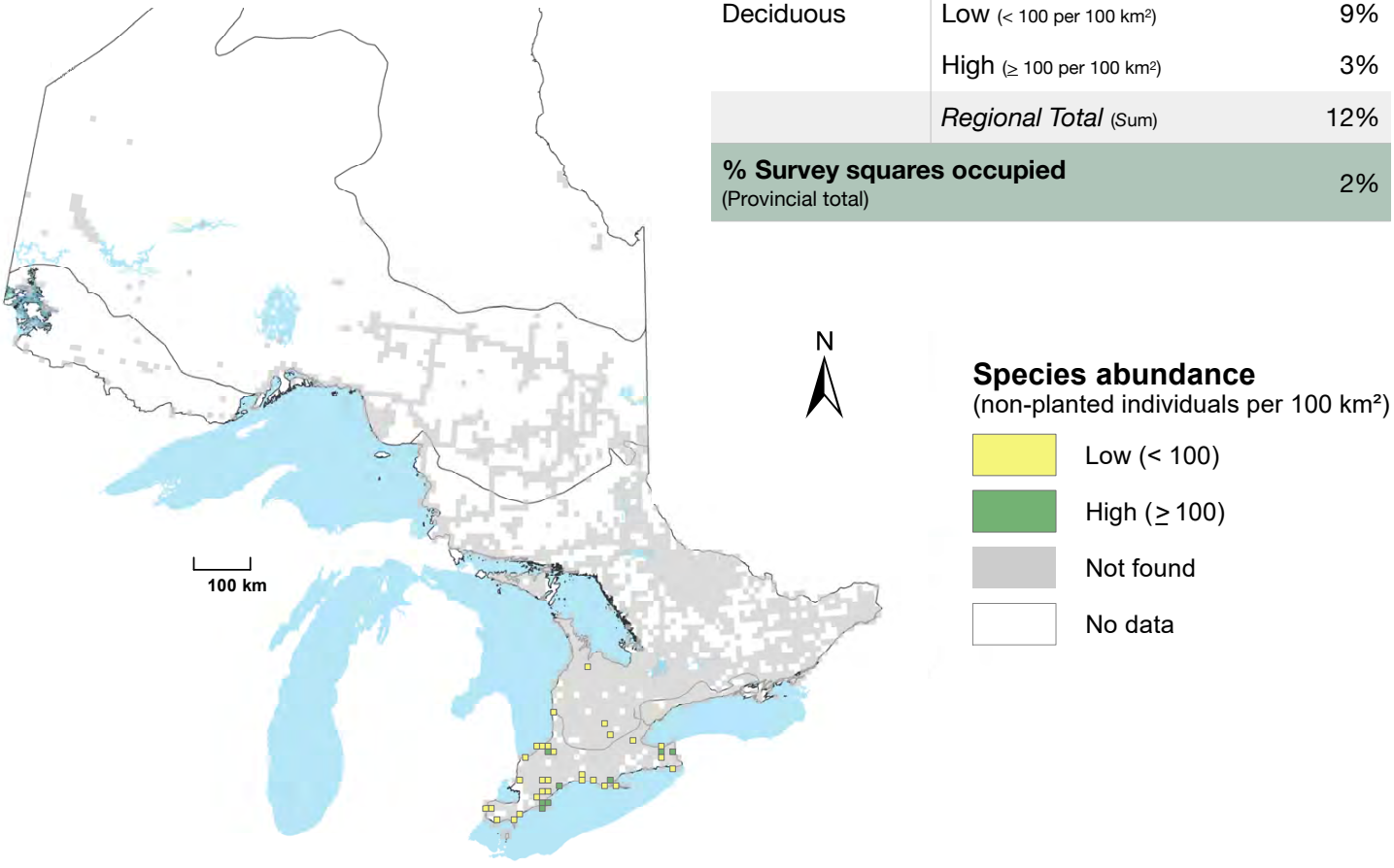
Native to Ontario

Reported distribution: Tulip trees had a limited distribution in Ontario and were primarily found in the southwest of the province. The species' distribution was fairly discontinuous with tulip trees often identified in isolated survey squares. Tulip trees occupied 12% of squares surveyed in the deciduous forest region.

Reported abundance: Tulip trees were most commonly observed to grow at low abundance (< 100 individuals). Combined with their limited range, tulip trees can be considered to have a low abundance provincially. The species was observed in only 2% of survey squares.

Table 58 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

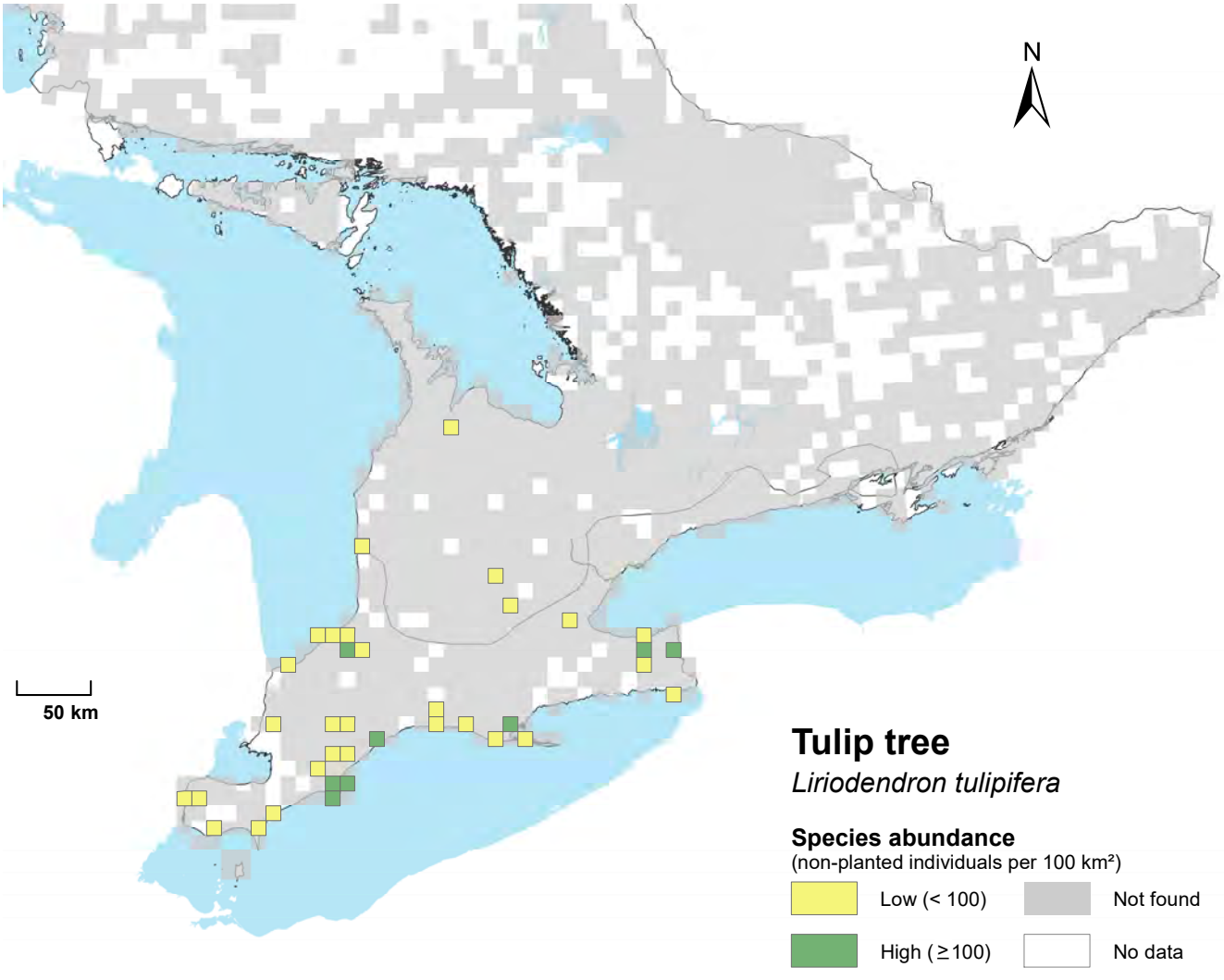
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		2%



Tulip tree | Tulipier de Virginie

Liriodendron tulipifera

The reported distribution and abundance of tulip tree in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Osage-orange | Bois d'arc

Maclura pomifera

Introduced to Ontario

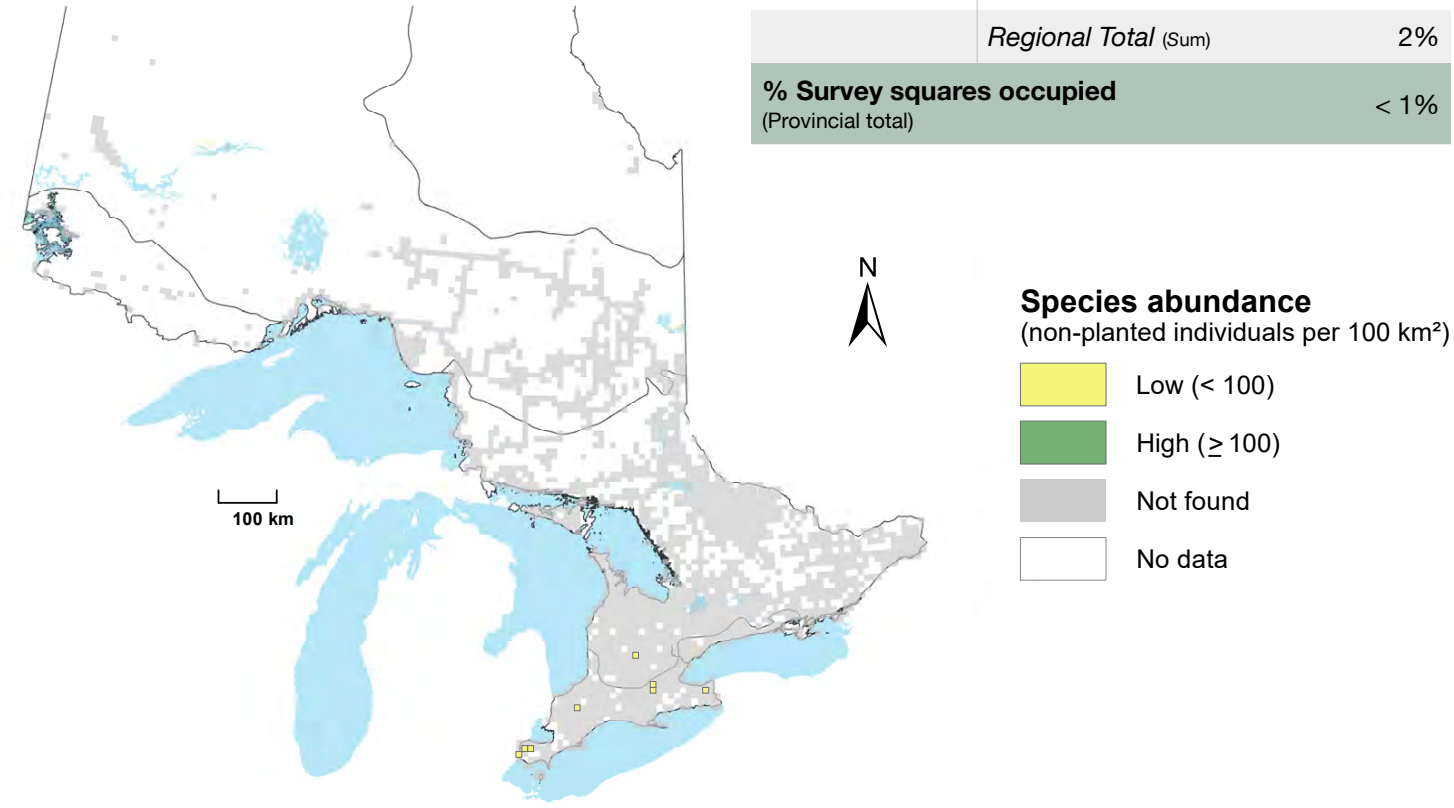
Reported distribution: Osage-orange is an introduced species in Ontario. The distribution of non-planted individuals was limited to southwestern Ontario. The species was identified in isolated survey squares which were mostly located in the deciduous forest region (2% of surveyed squares).

Reported abundance: Within its limited distribution, non-planted osage-orange was only observed to grow at low abundance, and the species is very uncommon at the provincial level.

Its low abundance and the small number of survey squares in which it was identified suggests that this introduced species is not a successful naturalizer in Ontario.

Table 59 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

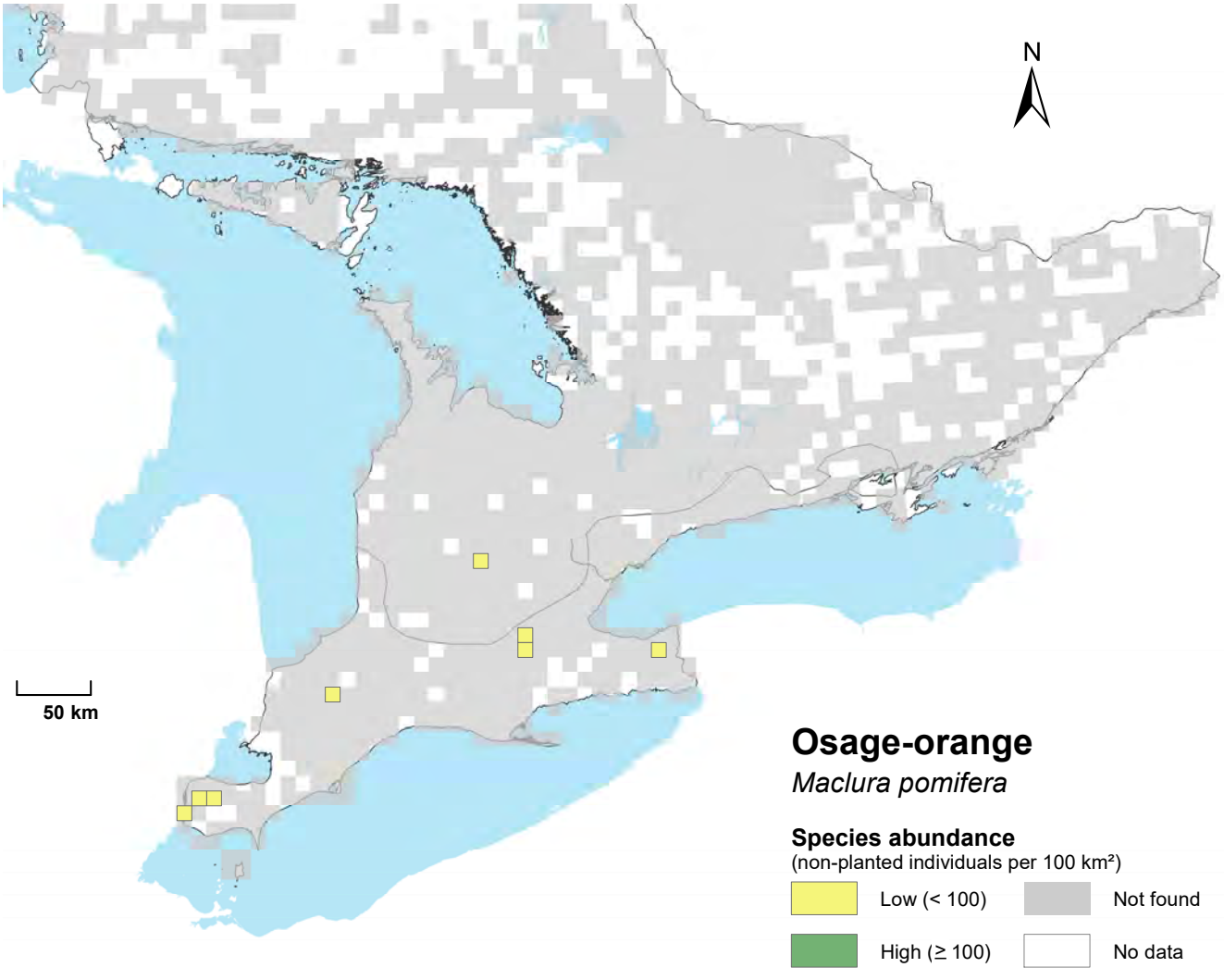
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	2%
% Survey squares occupied (Provincial total)		< 1%



Osage-orange | Bois d'arc

Maclura pomifera

The reported distribution and abundance of osage-orange in squares surveyed in southern Ontario



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Coordinate System: NAD 1927 UTM Zone 17N

Cucumber tree | Magnolia acuminé

Magnolia acuminata

Native to Ontario

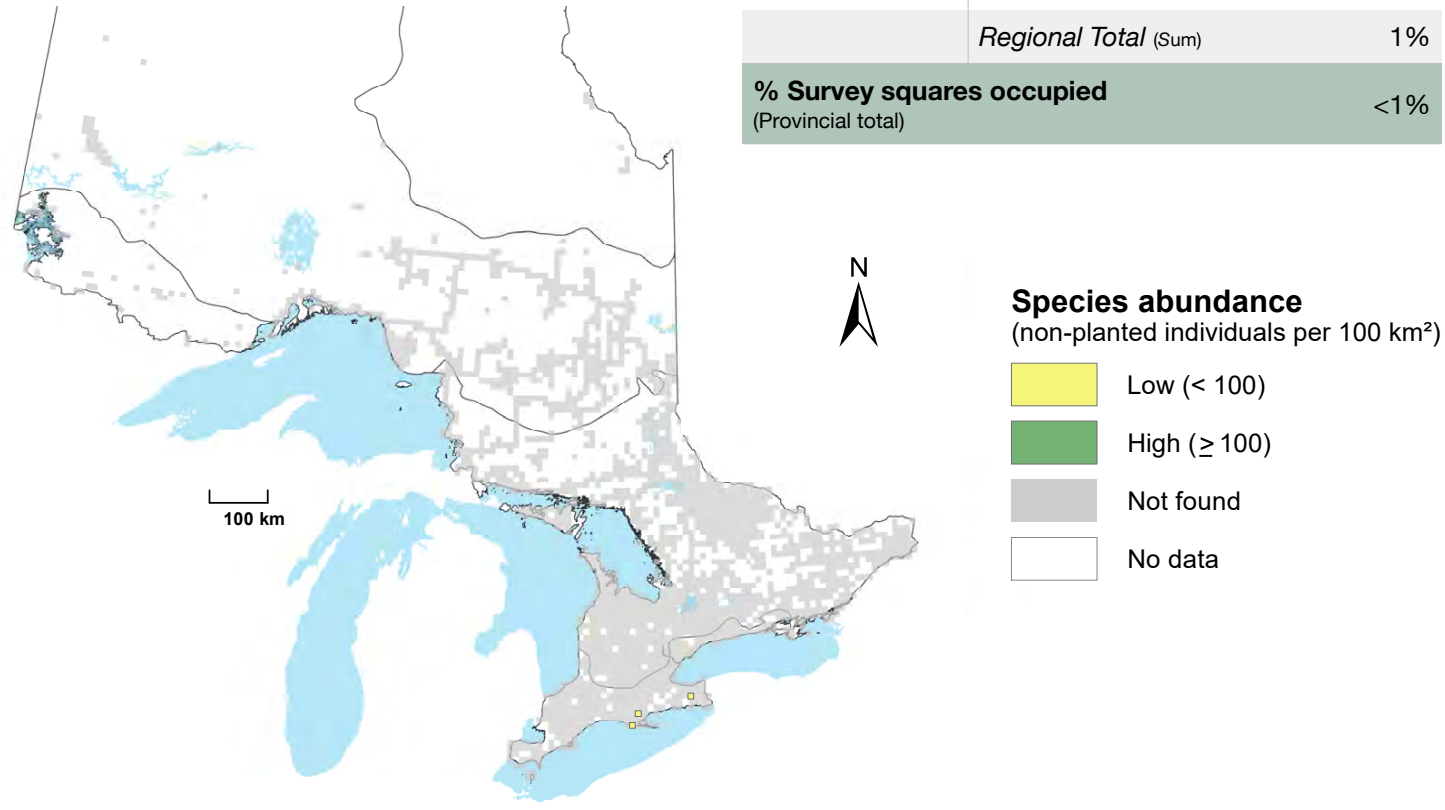
Reported distribution: Cucumber tree had a very limited distribution in the province. The species was identified in only three survey squares, all of which were located in the deciduous forest region of southwestern Ontario.

Reported abundance: In the few squares in which it was identified, cucumber tree was only observed at low abundance (< 100 individuals per survey square).

Habitat loss in the species' range is significant and seedling recruitment is low. Combined with its limited distribution, the small number of individuals has led to cucumber tree being listed as endangered both provincially and nationally.

Table 60 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

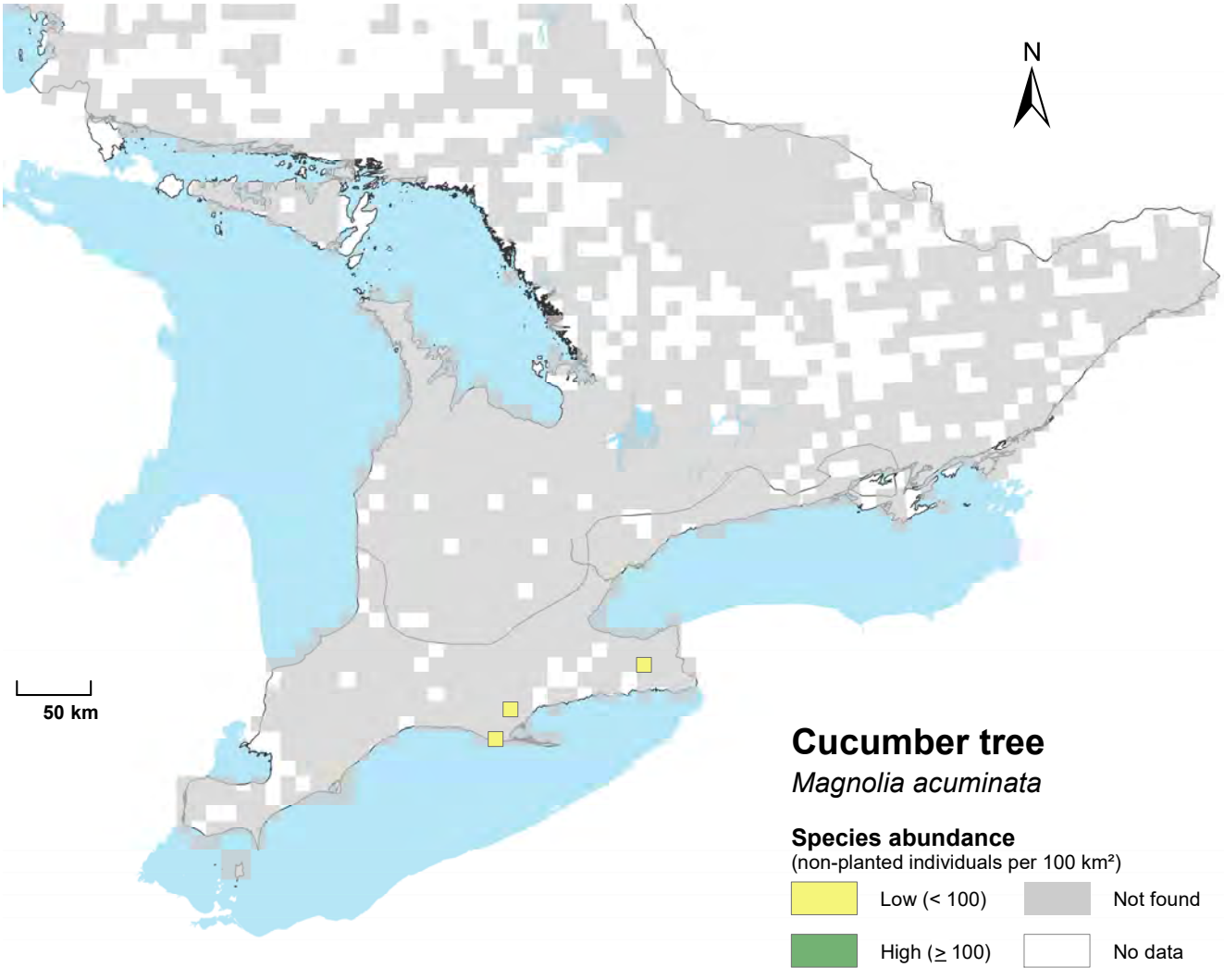
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	1%
% Survey squares occupied (Provincial total)		<1%



Cucumber tree | Magnolia acuminé

Magnolia acuminata

The reported distribution and abundance of cucumber tree in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

White mulberry | Mûrier blanc

Morus alba

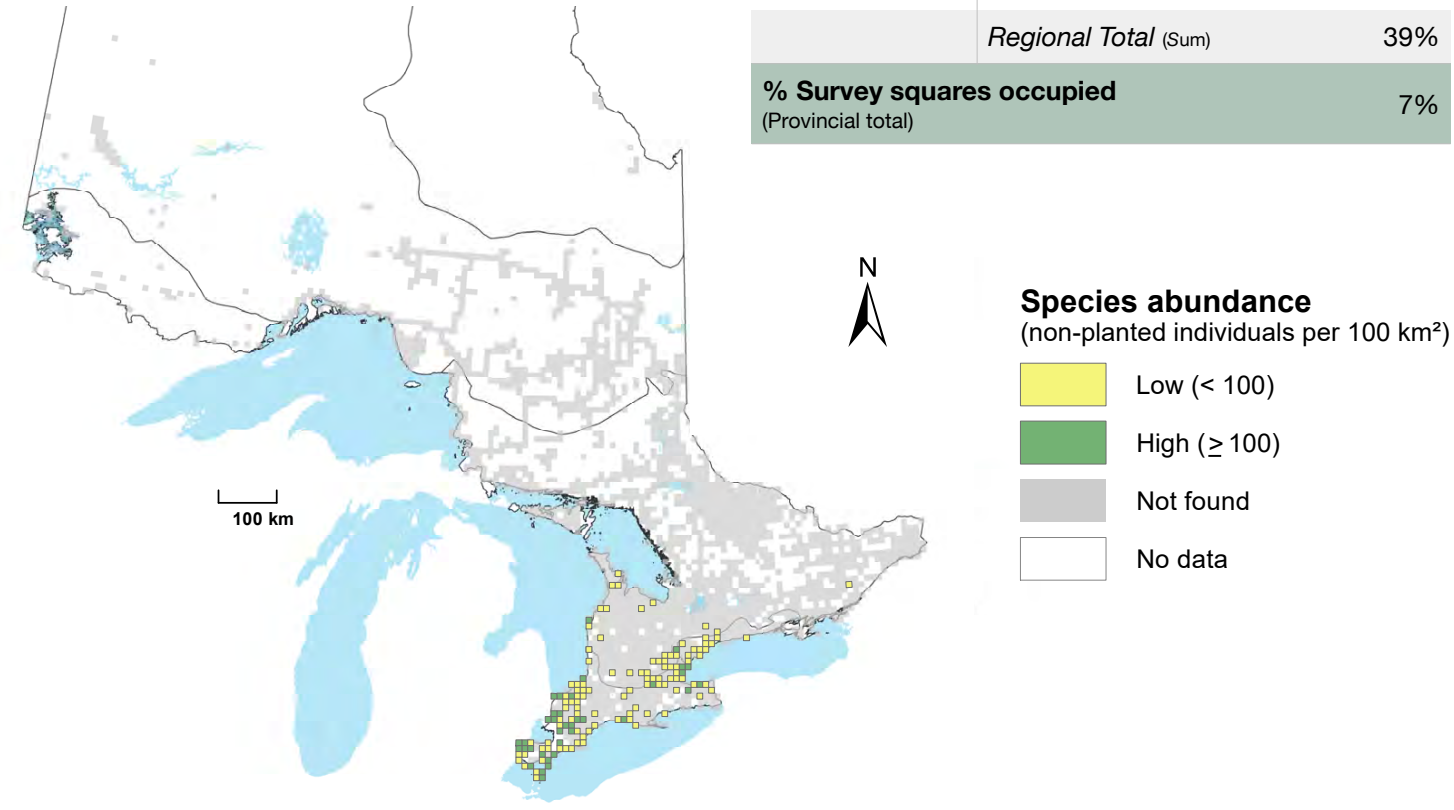
Introduced to Ontario

Reported distribution: An introduced species in Ontario, non-planted white mulberry were identified in survey squares south of 45°N latitude. The species' distribution included many urban and more heavily populated areas, an indication of its ability to spread in areas where it is heavily planted. White mulberry were found in 39% of squares surveyed in the deciduous forest region.

Reported abundance: Non-planted white mulberry were generally found growing at low abundance (< 100 individuals), although the species was relatively common in the southwestern-most areas of the province. White mulberry is by far the most commonly observed mulberry in Ontario.

Table 61 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

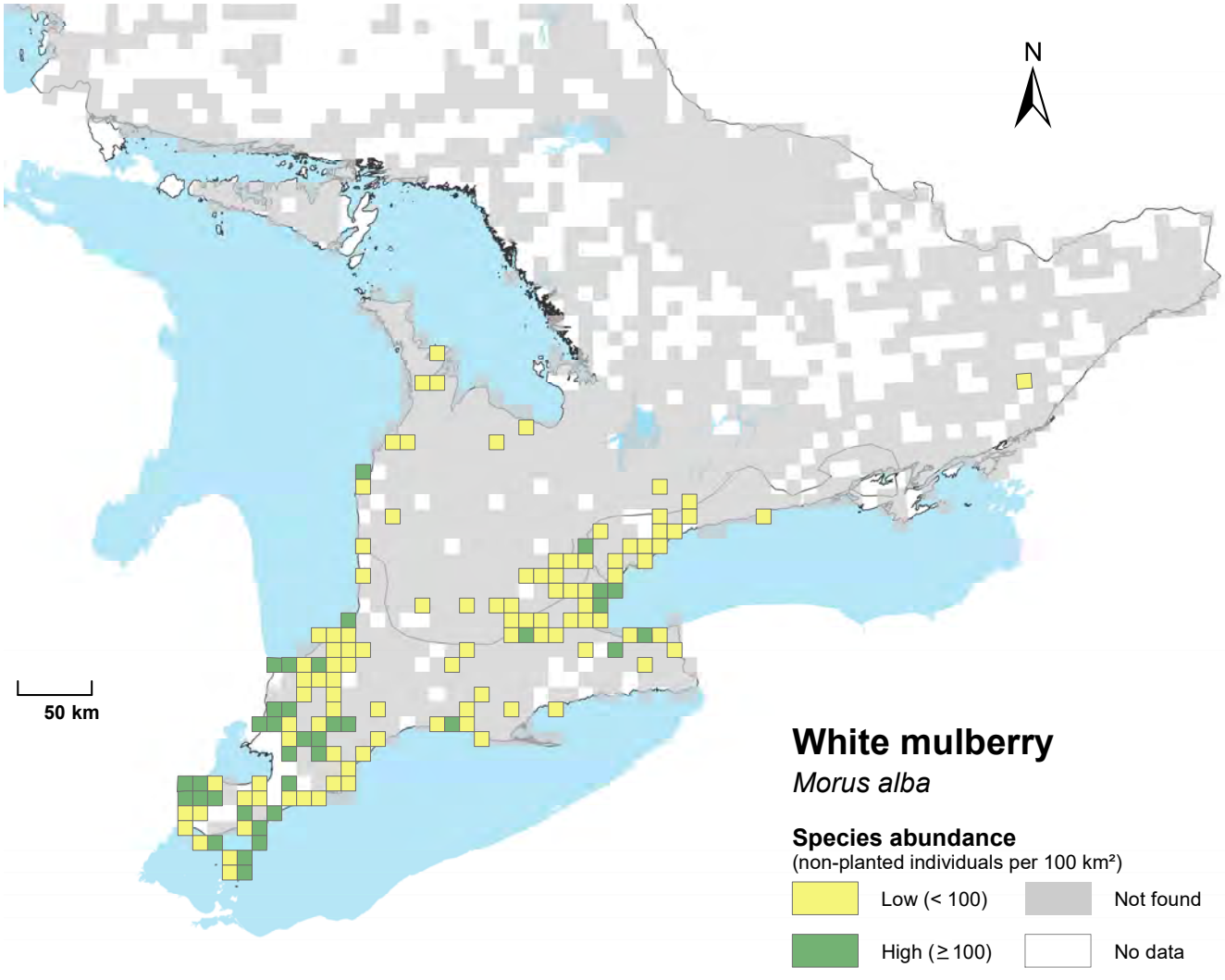
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	2%
Deciduous	Low (< 100 per 100 km²)	27%
	High (≥ 100 per 100 km²)	12%
	Regional Total (Sum)	39%
% Survey squares occupied (Provincial total)		7%



White mulberry | Mûrier blanc

Morus alba

The reported distribution and abundance of white mulberry in squares surveyed in southern Ontario (below 47°N)



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Red mulberry and white × red mulberry | Mûrier rouge et mûrier blanc × rouge

Morus rubra and *Morus alba* × *Morus rubra*

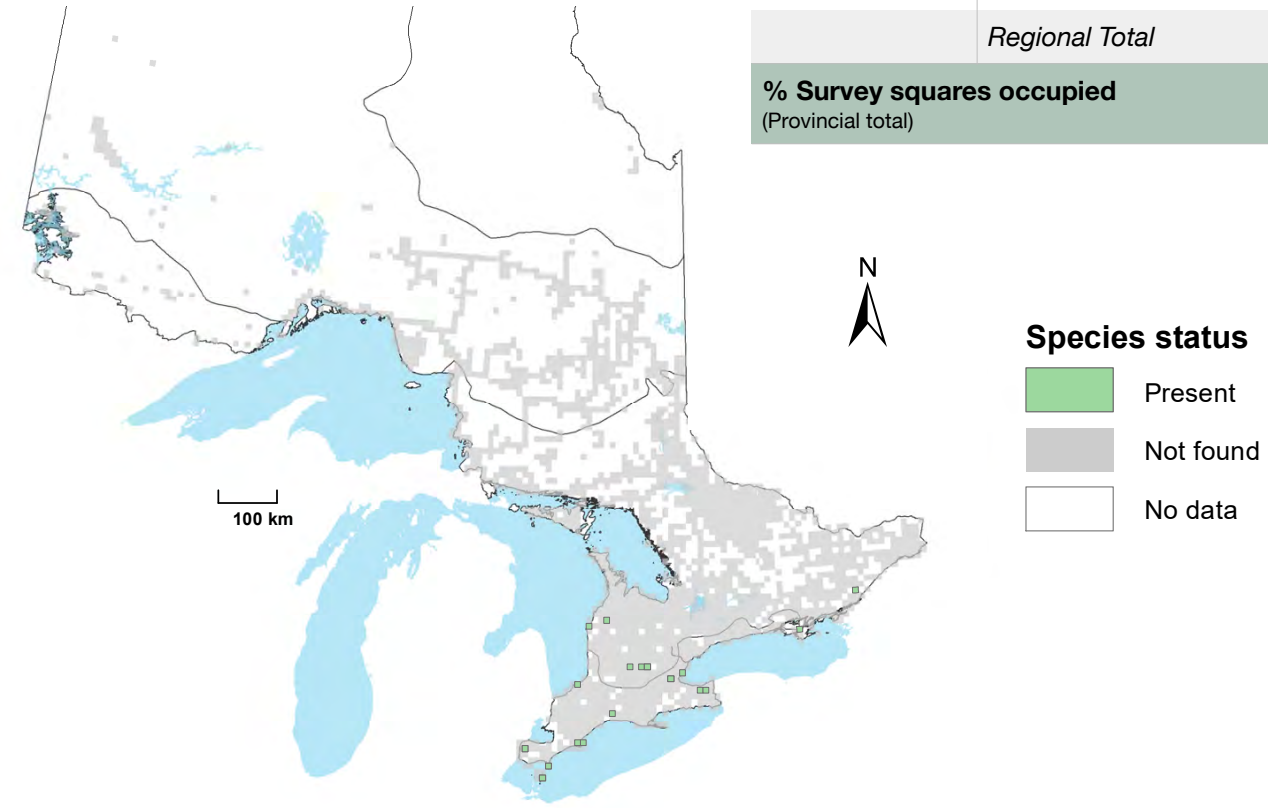
Native/introduced to Ontario

Reported distribution: Red and white x red mulberry hybrids had a limited distribution in Ontario. The species were identified in isolated squares surveyed in the southwest of the province. The presence of red x white mulberry hybrids within the known range of red mulberry adds complexity to documenting the true distribution of pure red mulberry, thus reports for both have been included on the accompanying map.

Reported abundance: Red mulberry is listed as an endangered species in Ontario due to on-going threats to the recovery of the population. Hybridization with the introduced white mulberry has led to a significant decline in the natural regeneration of pure red mulberry. Genetic analysis is required to distinguish between pure red mulberry and hybrids.

Table 62 The reported distribution of non-planted individuals in each forest region, and across the province. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

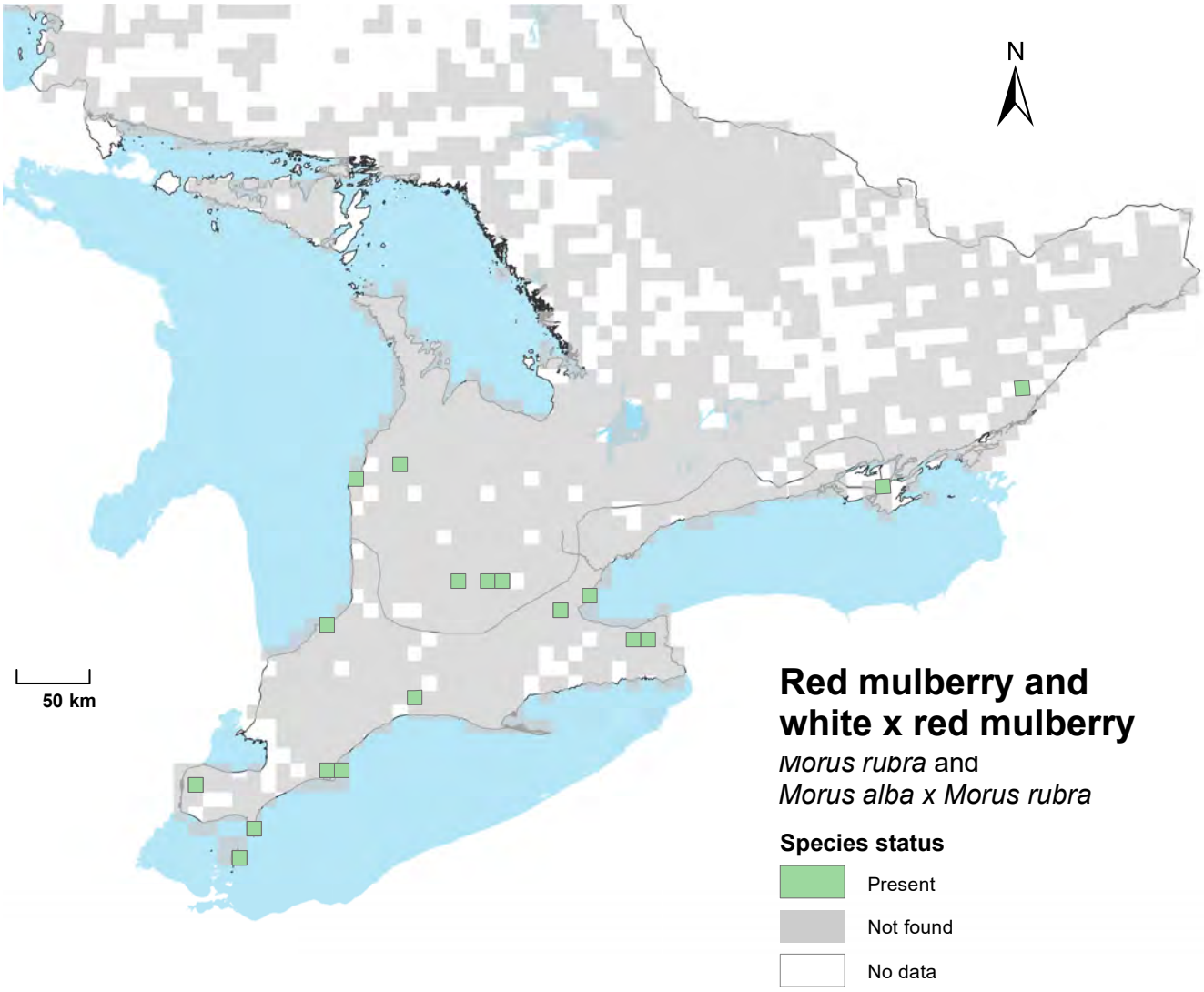
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	< 1%
Deciduous	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	4%
% Survey squares occupied (Provincial total)		< 1%



Red mulberry and white × red Mulberry | Mûrier rouge et mûrier blanc × rouge

Morus rubra and *Morus alba* × *Morus rubra*

The reported distribution of red mulberry and white × red mulberry in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Black gum | Nyssa sylvestre

Nyssa sylvatica

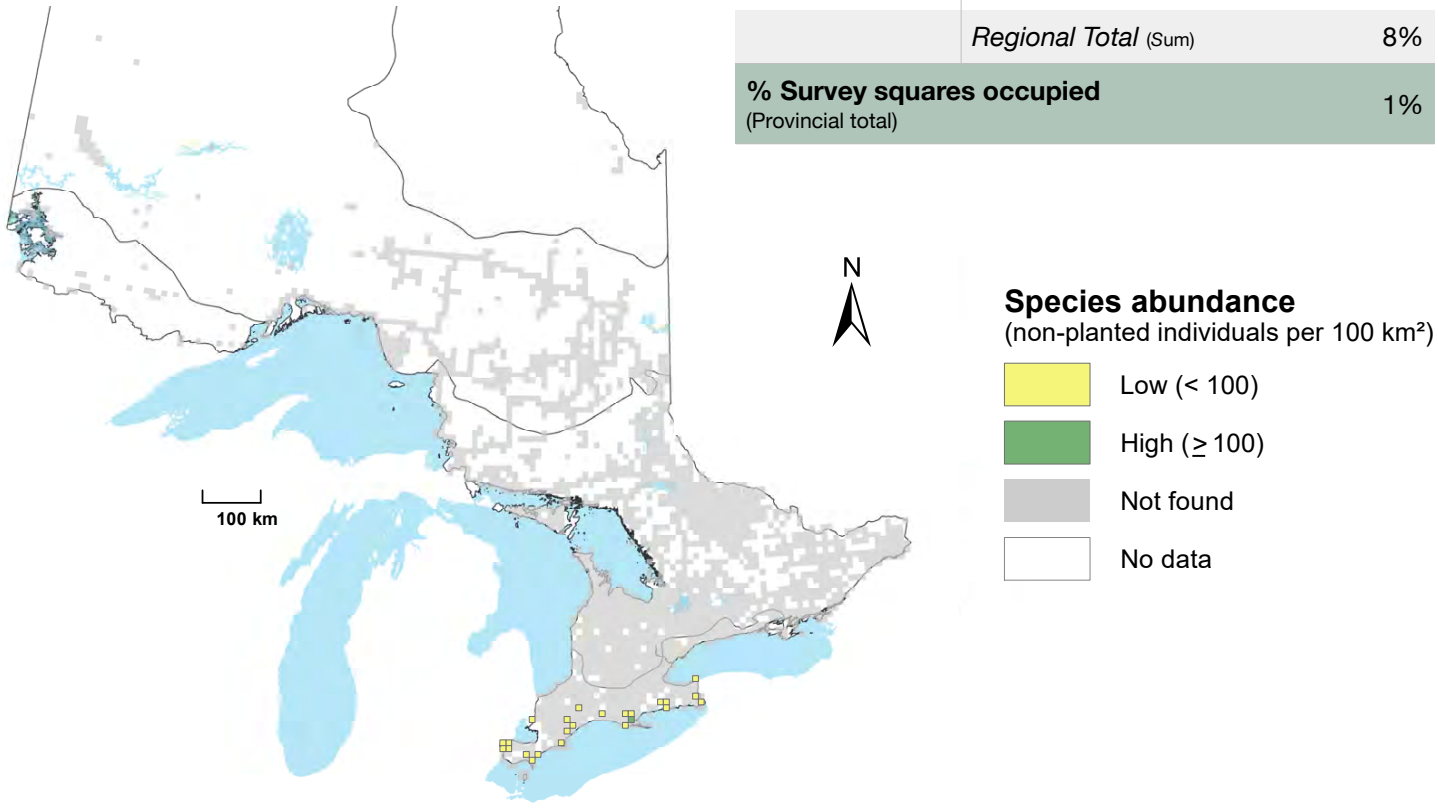
Native to Ontario

Reported distribution: The distribution of black gum in Ontario was entirely contained within the deciduous forest region where it occupied 8% of the surveyed squares. Within this area, the distribution of black gum was found to be fairly patchy and discontinuous.

Reported abundance: Black gum were generally found growing at low abundance, with only one survey square identified as having ≥ 100 individuals. The species was found in < 1% of the surveyed squares indicating that it is rarely encountered in Ontario. As a species of wetland habitats, relative abundance has likely seen dramatic declines in recent years due to widespread wetland draining for development purposes.

Table 63 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

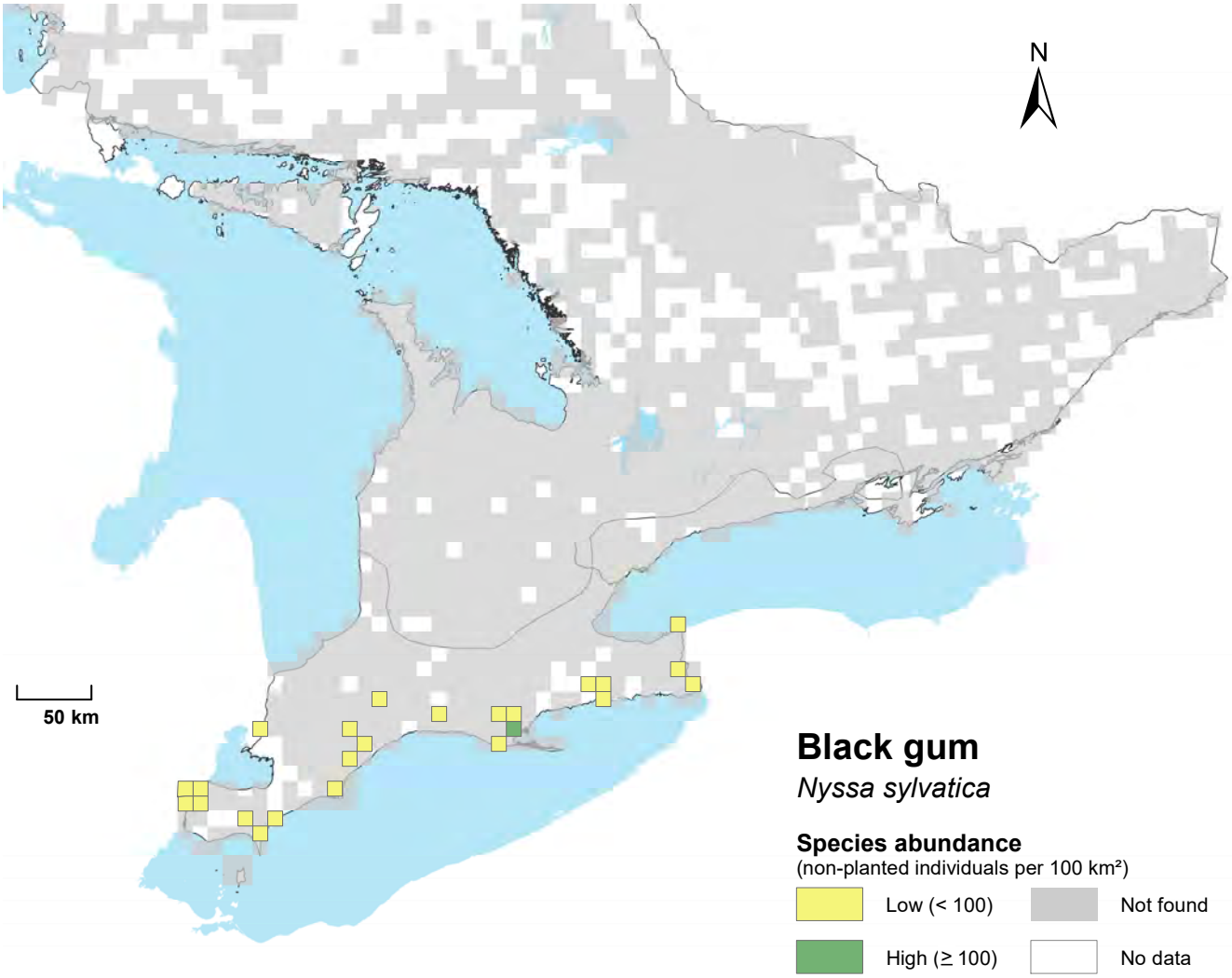
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	8%
% Survey squares occupied (Provincial total)		1%



Black gum | Nyssa sylvestre

Nyssa sylvatica

The reported distribution and abundance of black gum in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eastern hop-hornbeam | Ostryer de Virginie

Ostrya virginiana

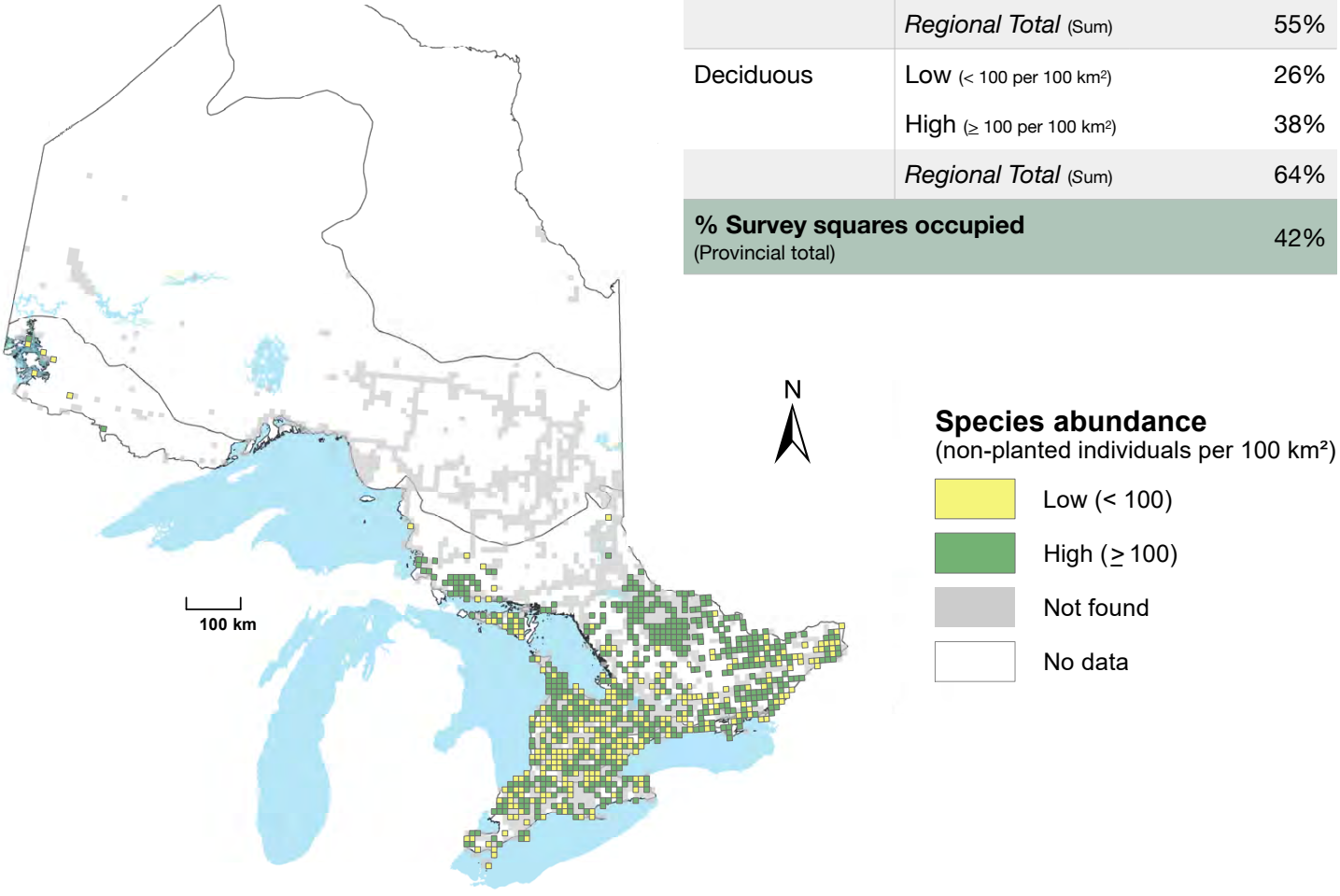
Native to Ontario

Reported distribution: Eastern hop-hornbeam was widespread throughout southern Ontario where it occupied 55% and 64% of surveyed squares in the Great Lakes - St. Lawrence and deciduous forest regions. The species was largely absent from the northern half of the province and was not identified in squares surveyed in the boreal forest region.

Reported abundance: Eastern hop-hornbeam was relatively common throughout southern Ontario. It was frequently observed at high abundance (≥ 100 individuals) throughout its range.

Table 64 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

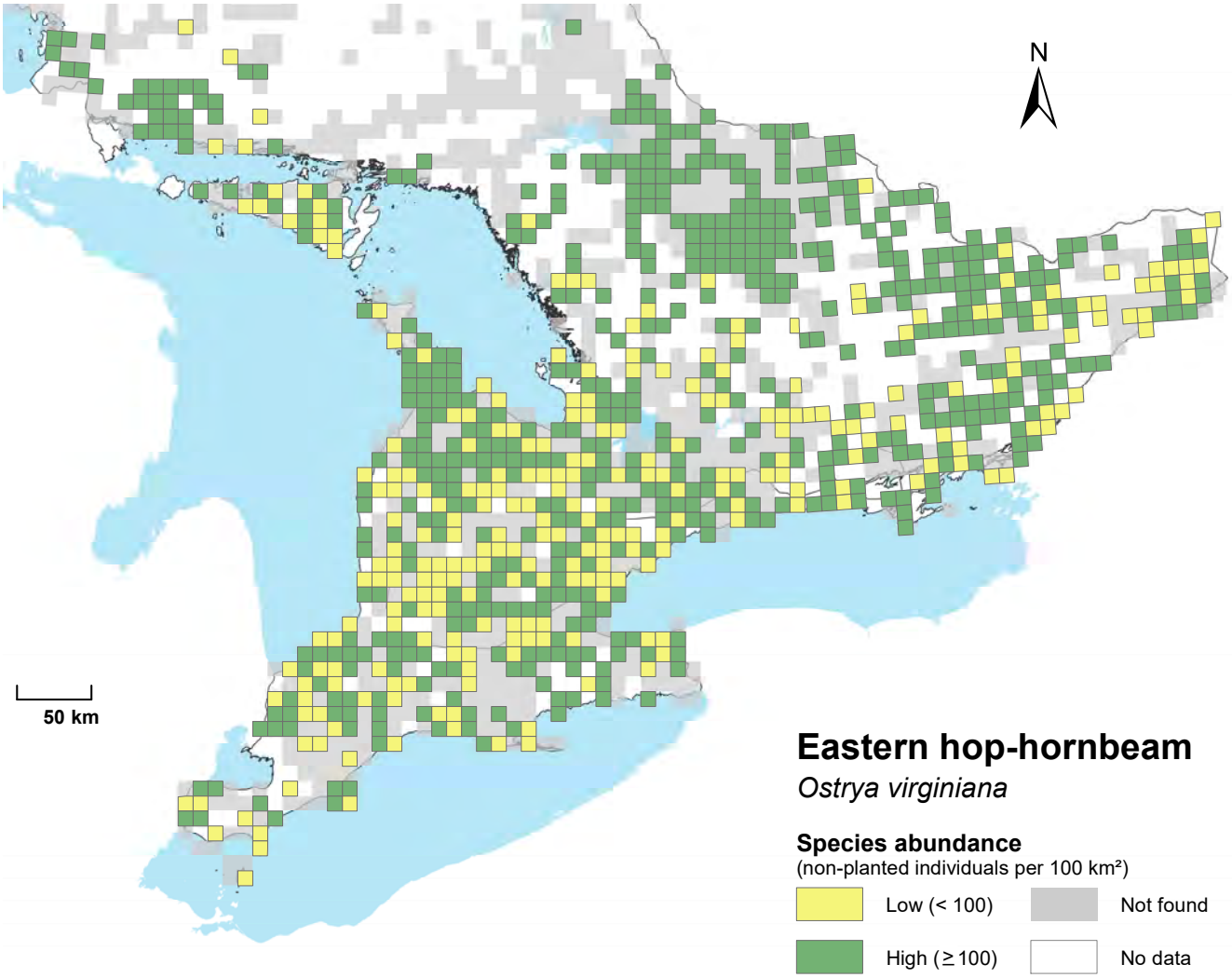
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	38%
	Regional Total (Sum)	55%
Deciduous	Low (< 100 per 100 km²)	26%
	High (≥ 100 per 100 km²)	38%
	Regional Total (Sum)	64%
% Survey squares occupied (Provincial total)		42%



Eastern hop-hornbeam | Ostryer de Virginie

Ostrya virginiana

The reported distribution and abundance of eastern hop-hornbeam in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Sycamore | Platane occidental

Platanus occidentalis

Native to Ontario

Reported distribution: The distribution of sycamore was mainly confined to the deciduous forest region of southwestern Ontario where the species occupied 26% of surveyed squares. The species was largely absent from survey squares in the other, more northern, forest regions.

Reported abundance: Sycamore tended to grow at low abundance (< 100 individuals) within its distribution. Although the species was found throughout much of the deciduous forest region, it was rarely encountered outside of southwestern Ontario. Widespread wetland draining has likely limited pathways for natural regeneration and migration.

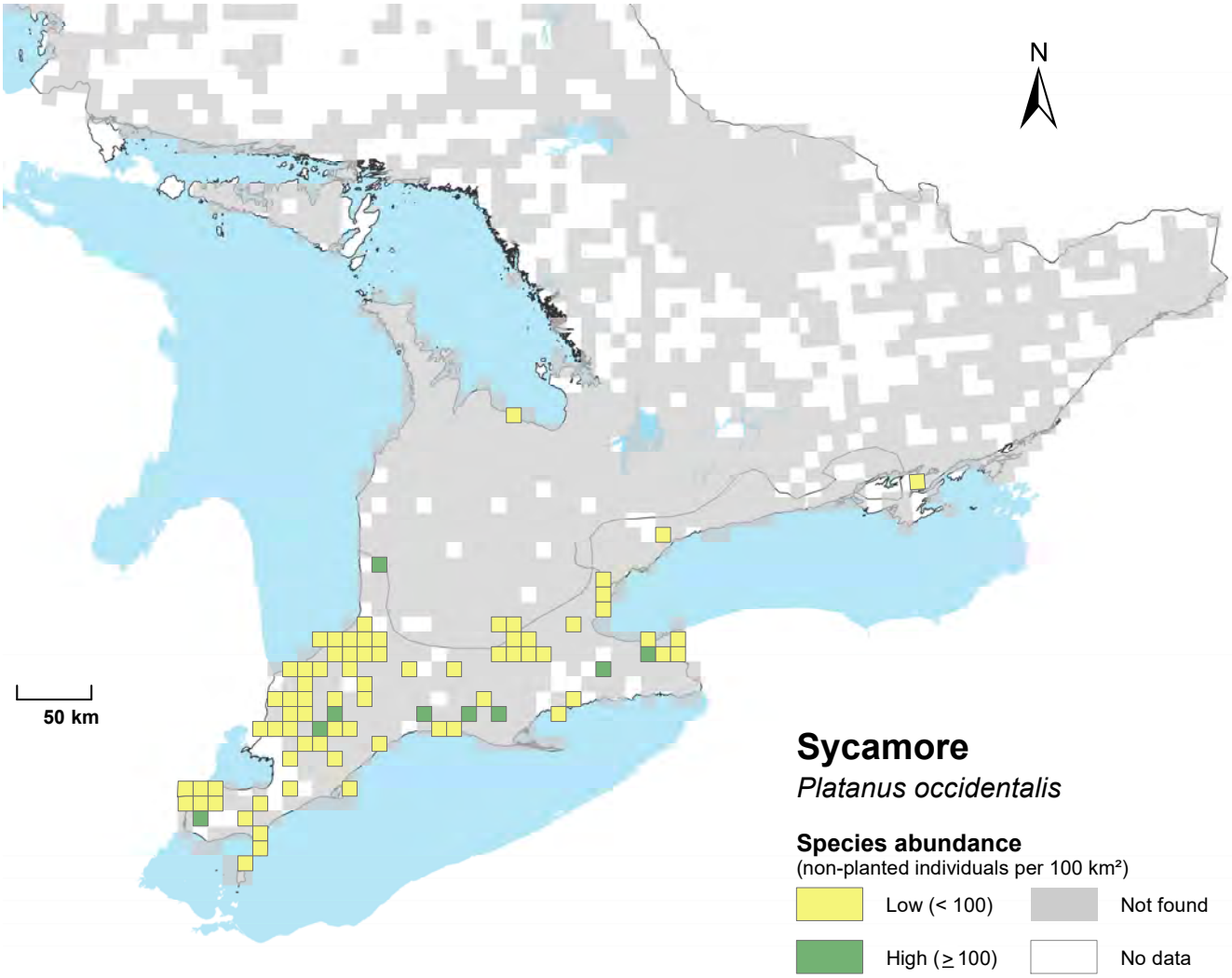
Table 65 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	23%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	26%
% Survey squares occupied (Provincial total)		4%

Sycamore | Platane occidental

Platanus occidentalis

The reported distribution and abundance of sycamore in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

White poplar | Peuplier blanc

Populus alba

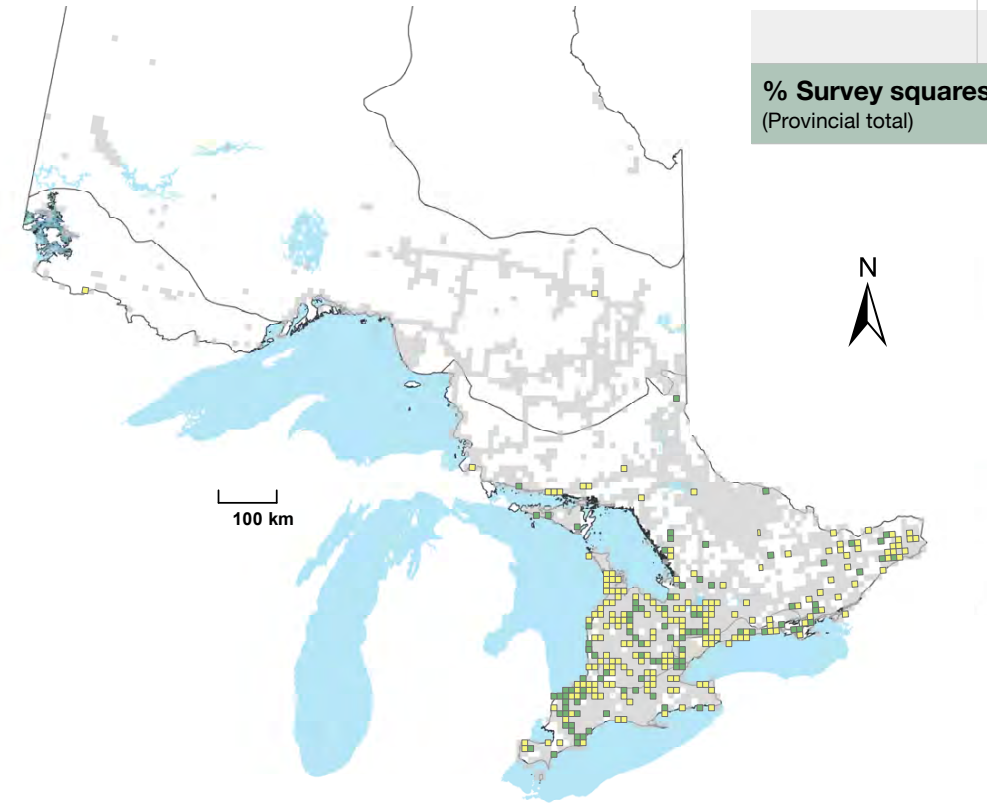
Introduced to Ontario

Reported distribution: White poplar is an introduced species in Ontario. Non-planted individuals were commonly identified in survey squares throughout southern Ontario, particularly in more heavily populated areas below 45°N latitude. The species occupied 14% of surveyed squares.

Reported abundance: Non-planted white poplars most often grew at low abundance (< 100 individuals). The distribution and abundance of non-planted white poplar are indicative of the species' ability to naturalize successfully in Ontario. As a colony-forming species, much of the observed naturalization is likely in the form of localized clones.

Table 66 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

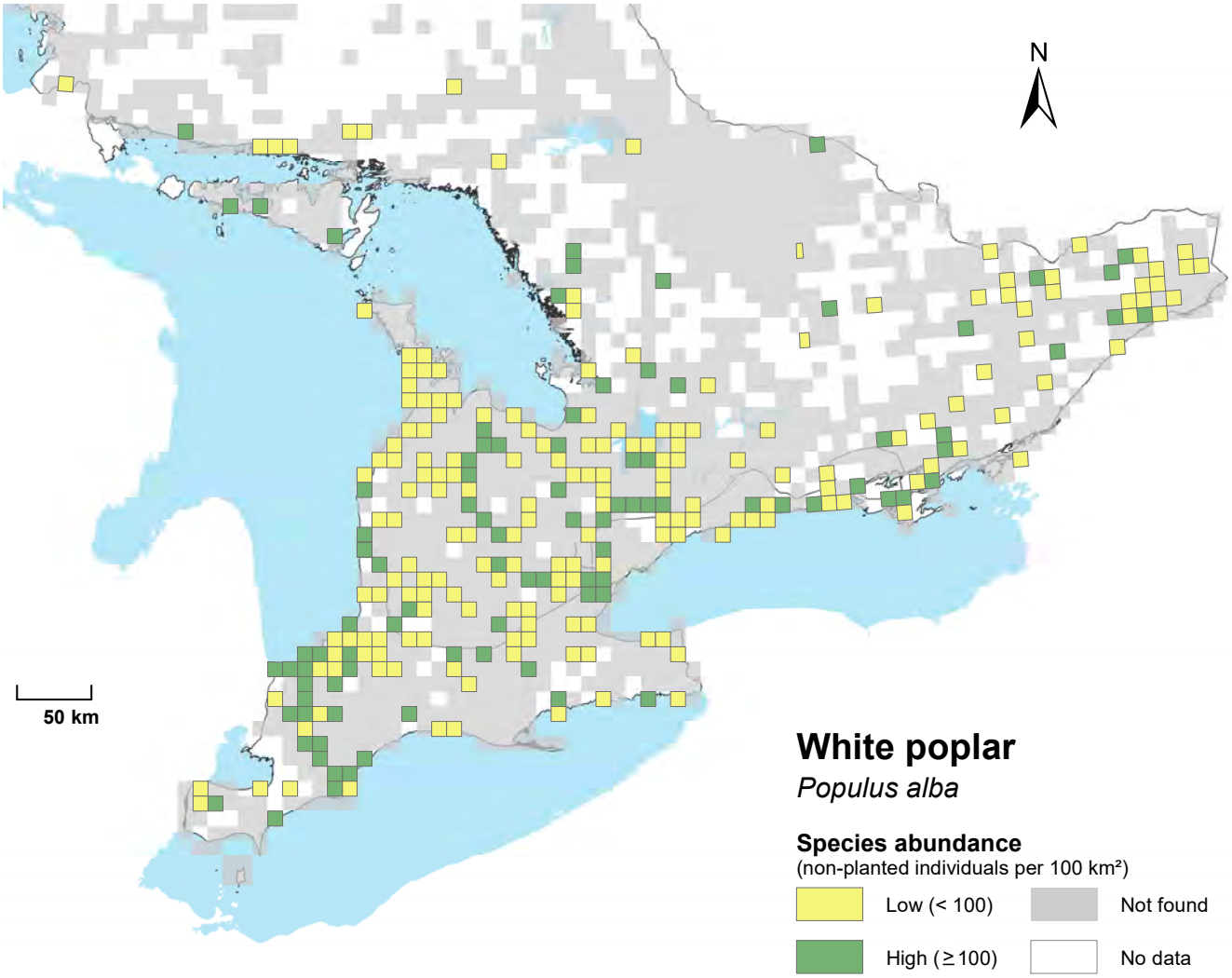
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	11%
	High (≥ 100 per 100 km²)	5%
	Regional Total (Sum)	16%
Deciduous	Low (< 100 per 100 km²)	19%
	High (≥ 100 per 100 km²)	13%
	Regional Total (Sum)	32%
% Survey squares occupied (Provincial total)		14%



White poplar | Peuplier blanc

Populus alba

The reported distribution and abundance of white poplar in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Balsam poplar | Peuplier baumier

Populus balsamifera

Native to Ontario

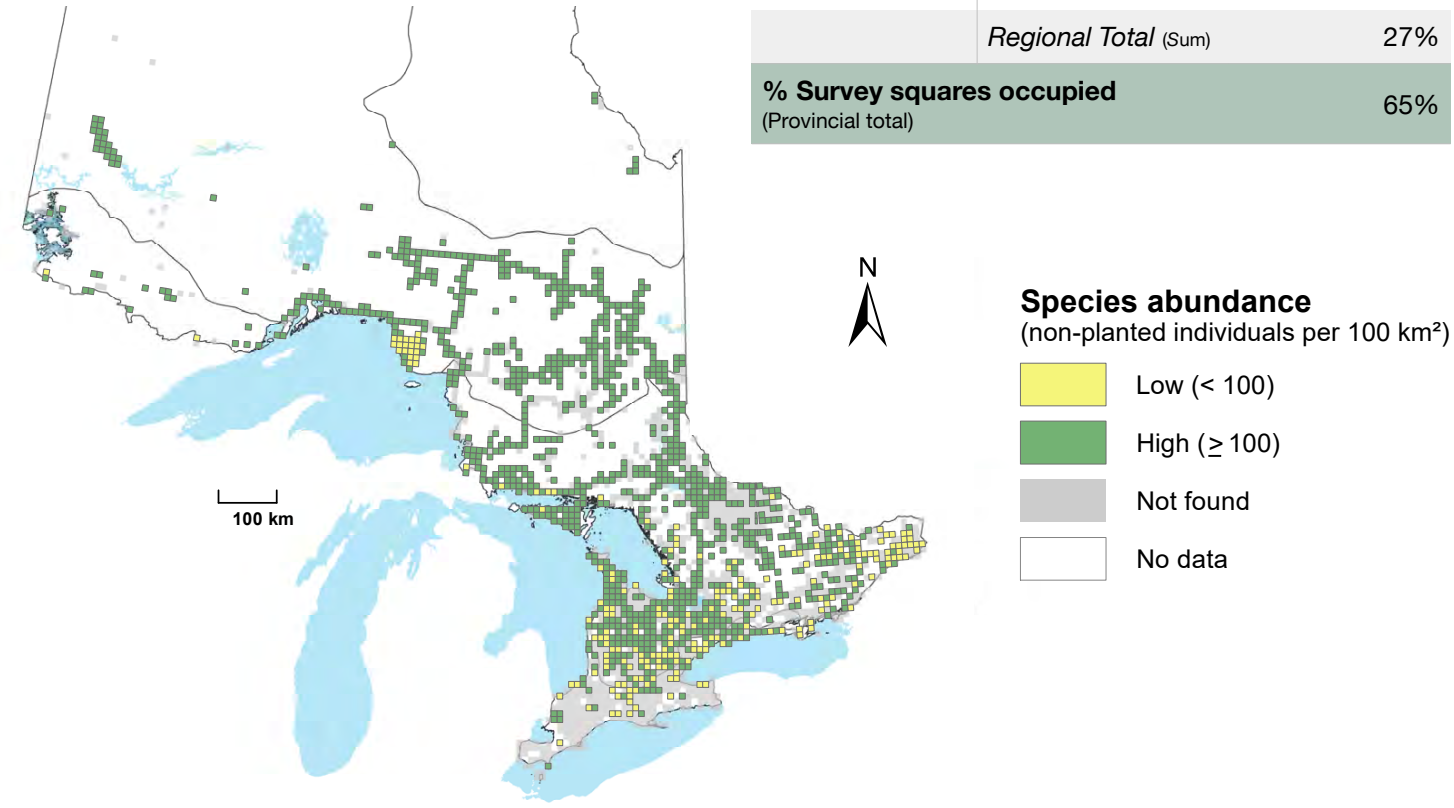
Reported distribution: Balsam poplar was observed throughout the boreal and Great Lakes - St. Lawrence forest regions where it occupied 84% and 66% of surveyed squares, respectively. The species was less frequently encountered in the deciduous forest region (27% of squares occupied).

Reported abundance: Balsam poplar was very abundant in Ontario, particularly outside of the deciduous forest region. The species was most commonly found growing at high abundance (≥ 100 individuals).

The northern distribution of balsam poplar, which is known to grow at higher latitudes in the province, is not fully captured by Tree Atlas surveys.

Table 67 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

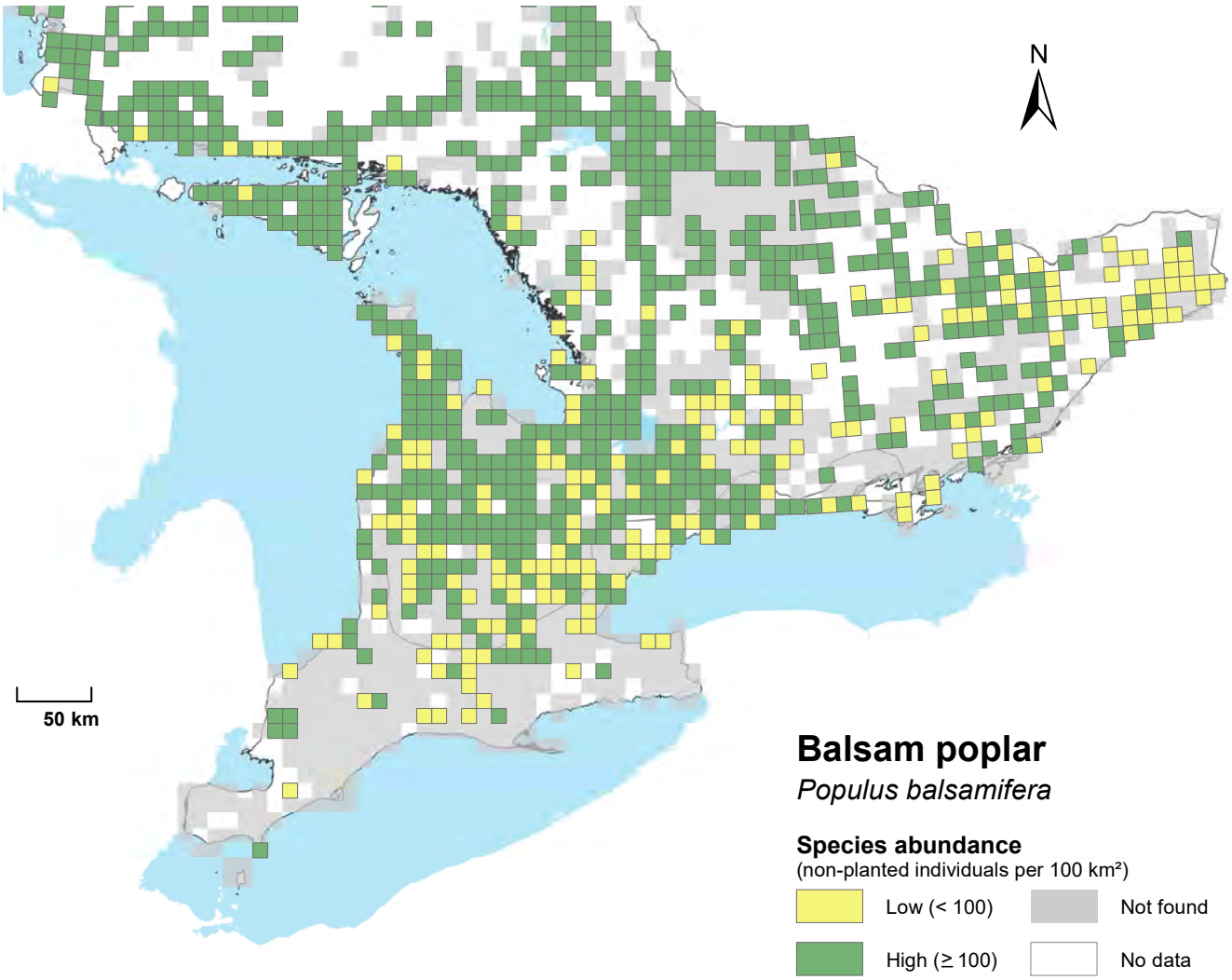
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	80%
	Regional Total (Sum)	84%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	52%
	Regional Total (Sum)	66%
Deciduous	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	15%
	Regional Total (Sum)	27%
% Survey squares occupied (Provincial total)		65%



Balsam poplar | Peuplier baumier

Populus balsamifera

The reported distribution and abundance of balsam poplar in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eastern cottonwood | Peuplier deltoïde

Populus deltoides

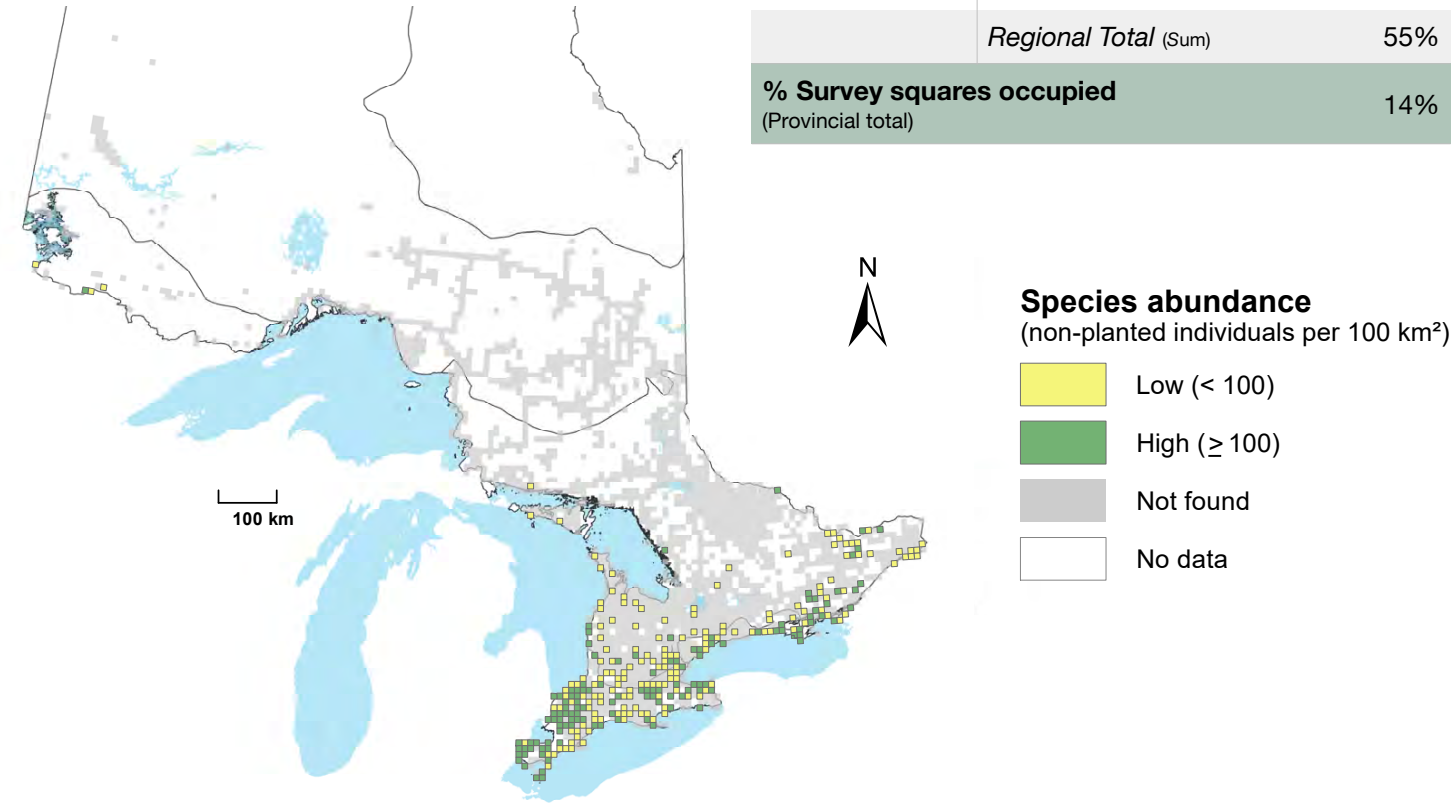
Native to Ontario

Reported distribution: Eastern cottonwood was observed in survey squares throughout southern Ontario, most of which were below 45°N latitude. The species was most common in the deciduous forest region, where it occupied 55% of surveyed squares and was absent from survey squares in the boreal forest region. Two subspecies (subsp. *deltoides* and subsp. *monolifera)* are recognized in Ontario, but were not distinguished while surveying. Many of the latter likely originate from western Canadian populations that were introduced via planting programs.

Reported abundance: Eastern cottonwood was most abundant in southwestern Ontario; the species grew at high abundance in 30% of squares surveyed in the deciduous forest region.

Table 68 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

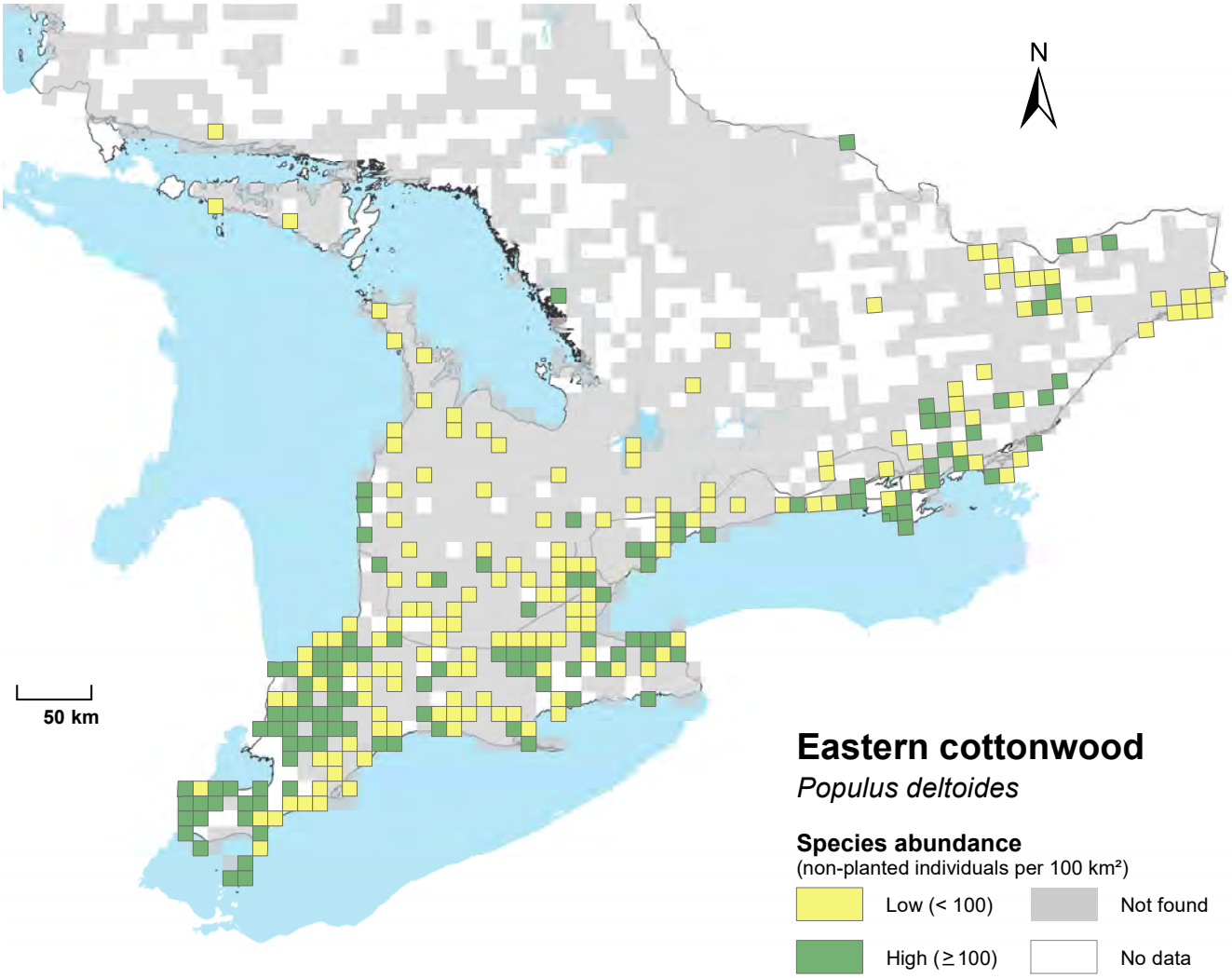
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	10%
Deciduous	Low (< 100 per 100 km²)	25%
	High (≥ 100 per 100 km²)	30%
	Regional Total (Sum)	55%
% Survey squares occupied (Provincial total)		14%



Eastern cottonwood | Peuplier deltoïde

Populus deltoides

The reported distribution and abundance of eastern cottonwood in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Canada poplar | Peuplier de Caroline

Populus × canadensis

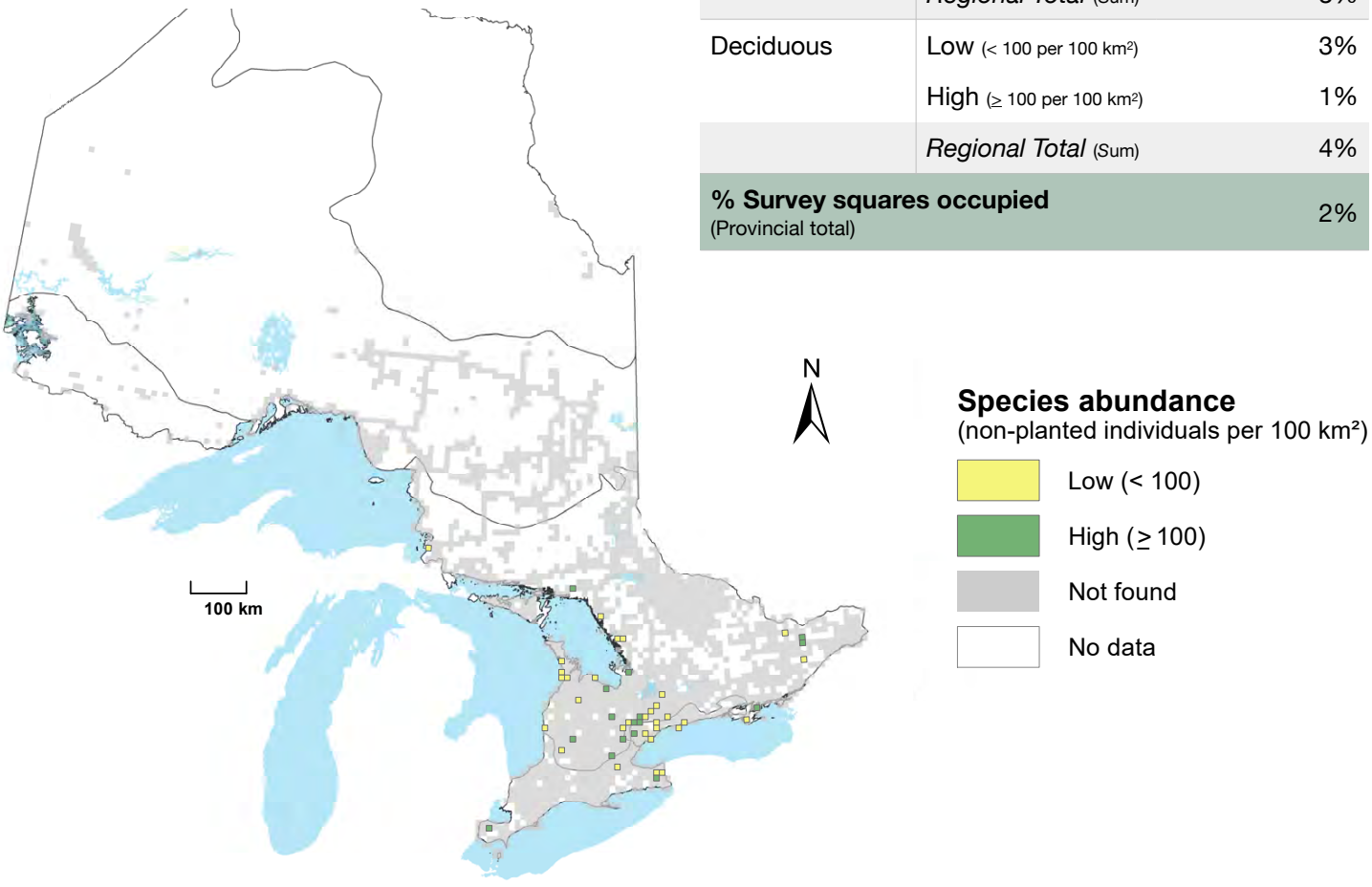
Introduced to Ontario

Reported distribution: Canada poplar is an introduced species in the province. It had a discontinuous distribution throughout southern Ontario. The species was identified in 4% and 3% of squares surveyed in the deciduous and Great Lakes - St. Lawrence forest regions, and was absent from the boreal forest region. Historically planted stock forms the basis of any naturalized individuals or populations in Ontario.

Reported abundance: Canada poplar had a relatively low abundance at the provincial level with only 15 squares having more than 100 individuals.

Table 69 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

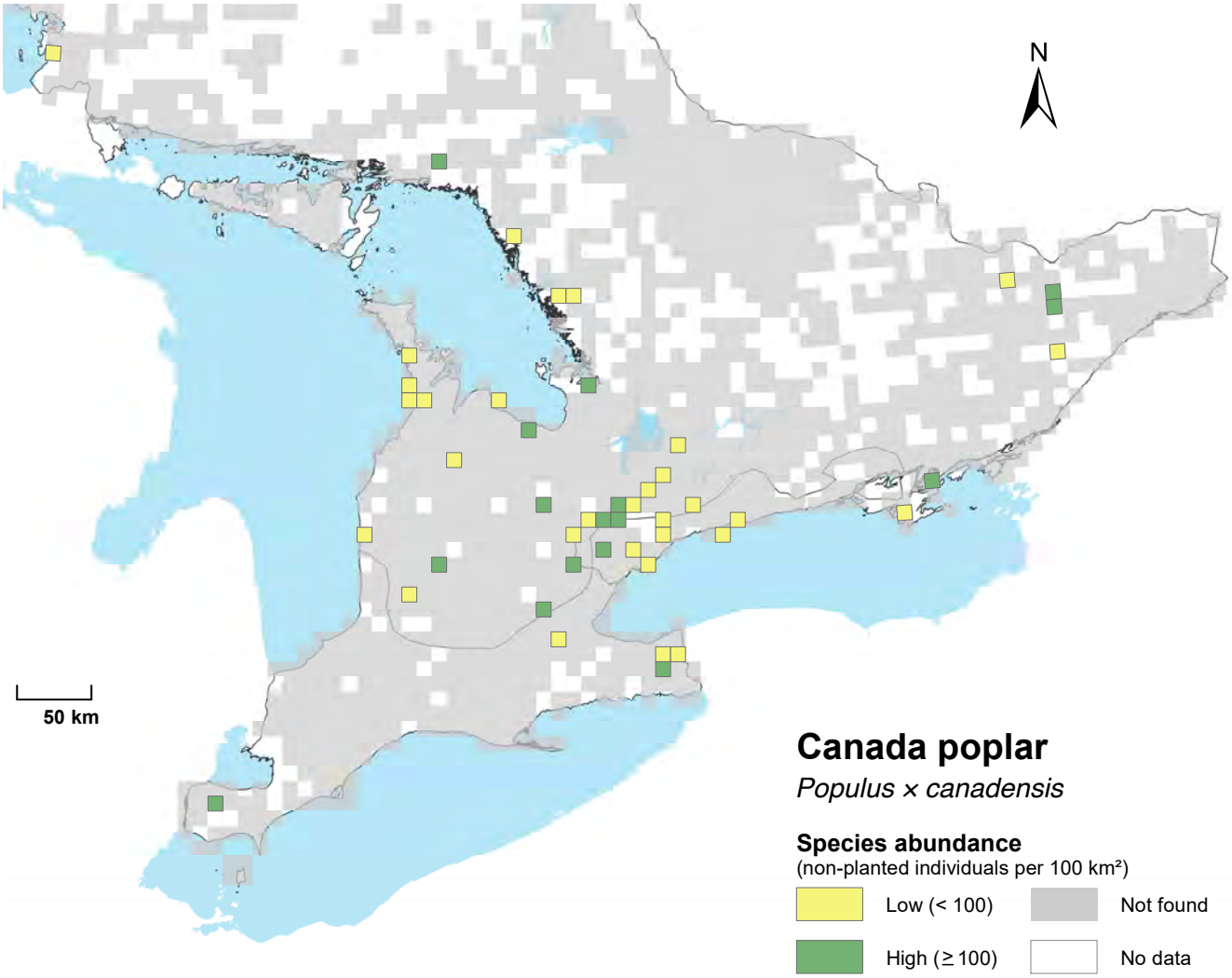
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	4%
% Survey squares occupied (Provincial total)		2%



Canada poplar | Peuplier de Caroline

Populus × canadensis

The reported distribution and abundance of Canada poplar in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Large-toothed aspen | Peuplier à grandes dents

Populus grandidentata

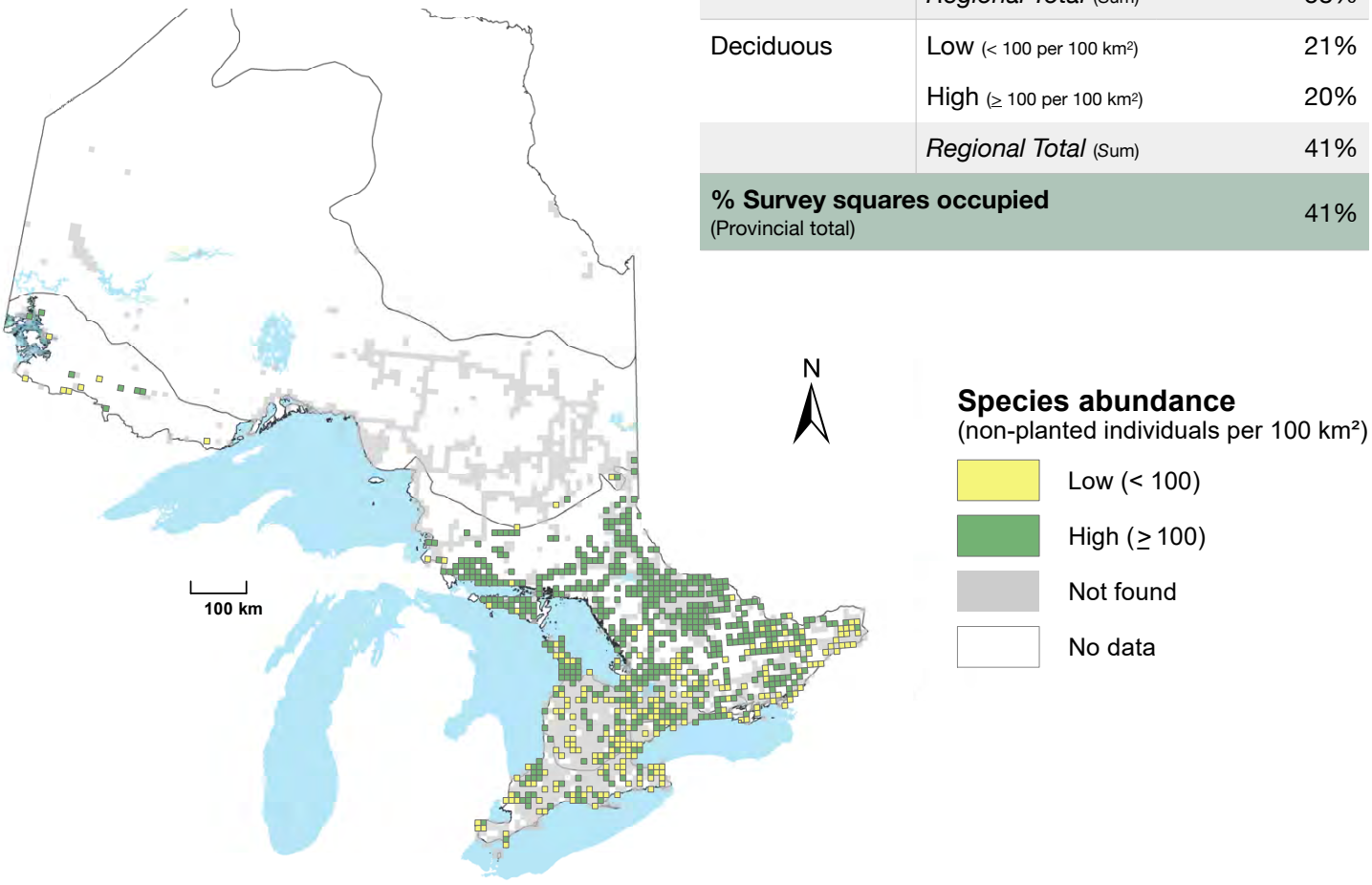
Native to Ontario

Reported distribution: Large-toothed aspen was widespread throughout southern Ontario and was largely absent from the boreal forest region. The species distribution was centred in the Great Lakes - St. Lawrence forest region where large-toothed aspen occupied 58% of surveyed squares.

Reported abundance: Large-toothed aspen was commonly observed at a high level of abundance (≥ 100 individuals per survey square). The species was less common in the southwestern portion of its range where it occupied fewer survey squares and tended to grow at low abundance (< 100 individuals).

Table 70 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

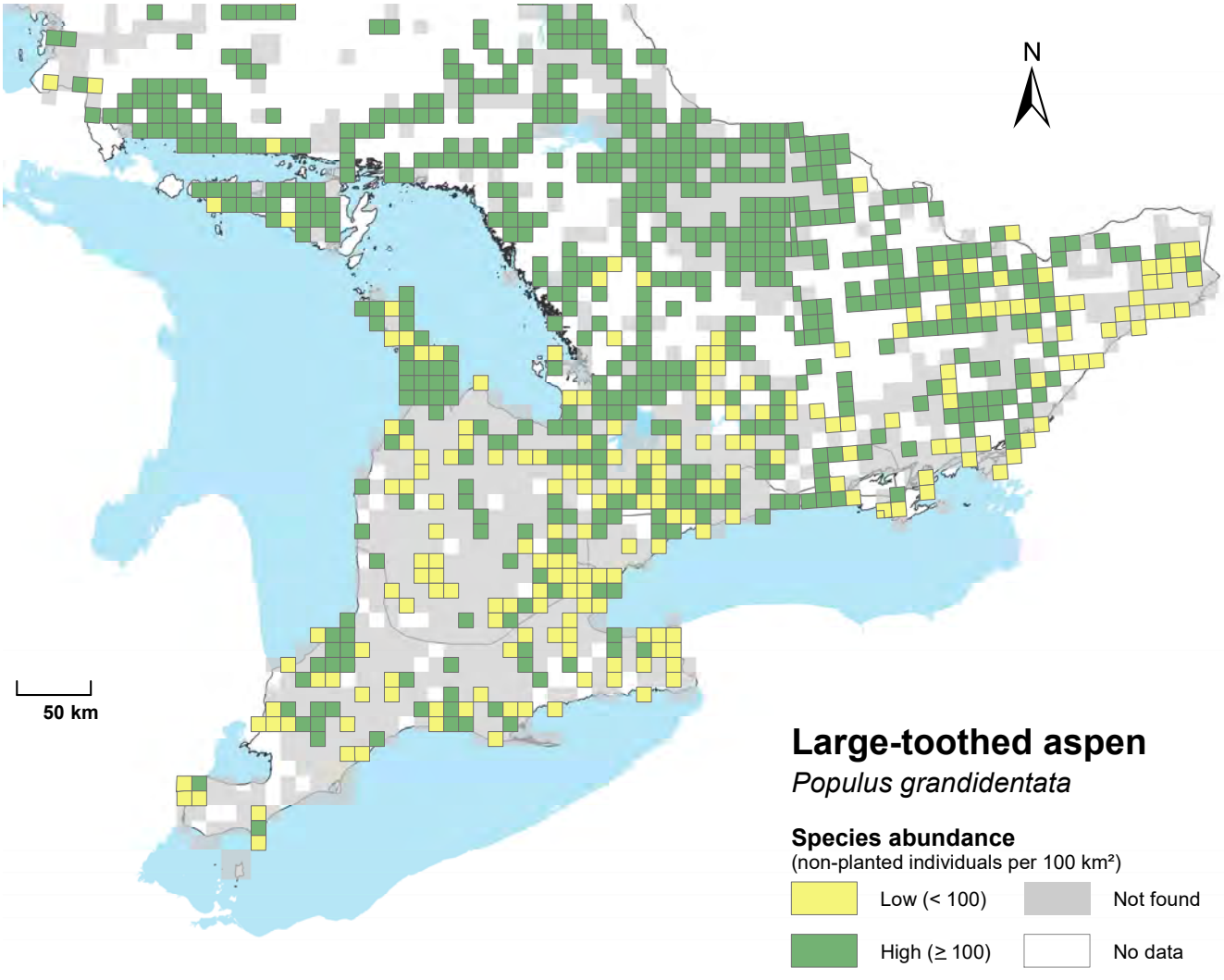
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	45%
	Regional Total (Sum)	58%
Deciduous	Low (< 100 per 100 km²)	21%
	High (≥ 100 per 100 km²)	20%
	Regional Total (Sum)	41%
% Survey squares occupied (Provincial total)		41%



Large-toothed aspen | Peuplier à grandes dents

Populus grandidentata

The reported distribution and abundance of large-toothed aspen in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Trembling aspen | Peuplier faux-tremble

Populus tremuloides

Native to Ontario

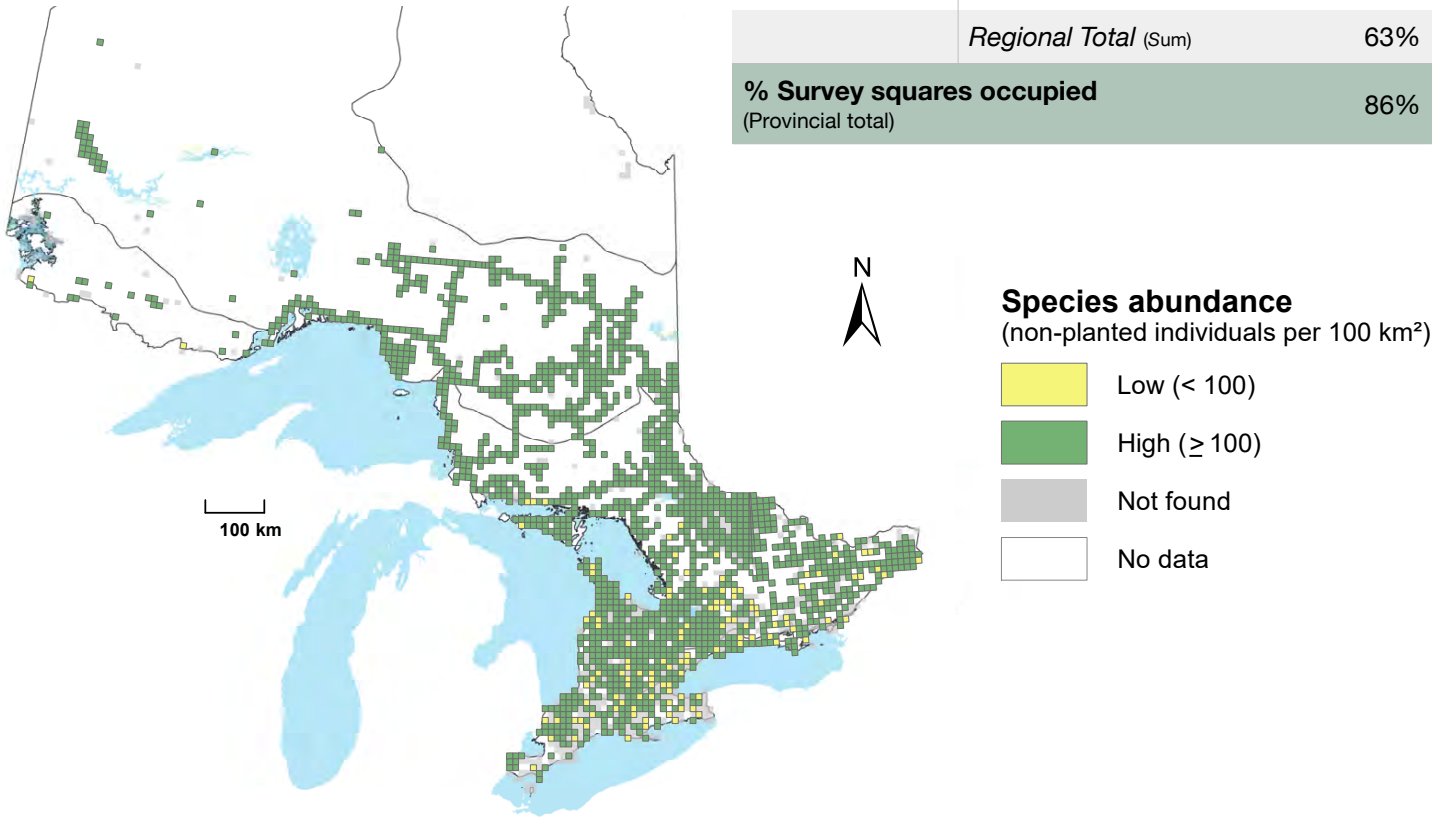
Reported distribution: Trembling aspen was observed in 86% of squares surveyed for the Tree Atlas. The species was identified in 97% and 88% of squares surveyed in the boreal and Great Lakes - St. Lawrence forest regions. The distribution of trembling aspen was slightly patchy in the extreme southwest of the province.

Reported abundance: Trembling aspen was highly abundant in Ontario and grew at high levels (≥ 100 individuals) in the vast majority of squares in which the species was identified.

The northern distribution of trembling aspen, which is known to grow at higher latitudes in the province, is not fully captured by Tree Atlas surveys.

Table 71 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

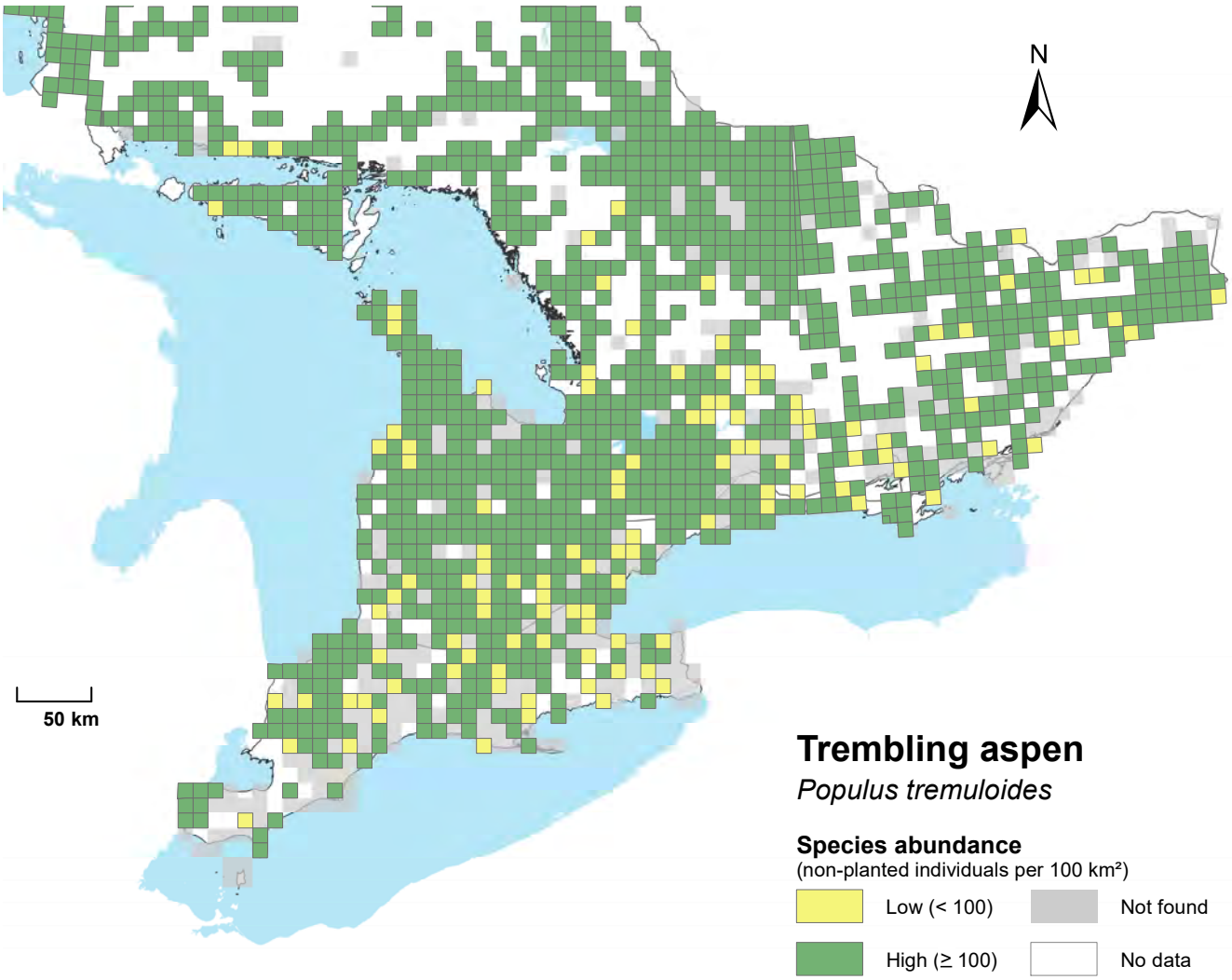
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	97%
	Regional Total (Sum)	97%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	82%
	Regional Total (Sum)	88%
Deciduous	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	49%
	Regional Total (Sum)	63%
% Survey squares occupied (Provincial total)		86%



Trembling aspen | Peuplier faux-tremble

Populus tremuloides

The reported distribution and abundance of trembling aspen in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

American plum | Prunier d'Amérique

Prunus americana

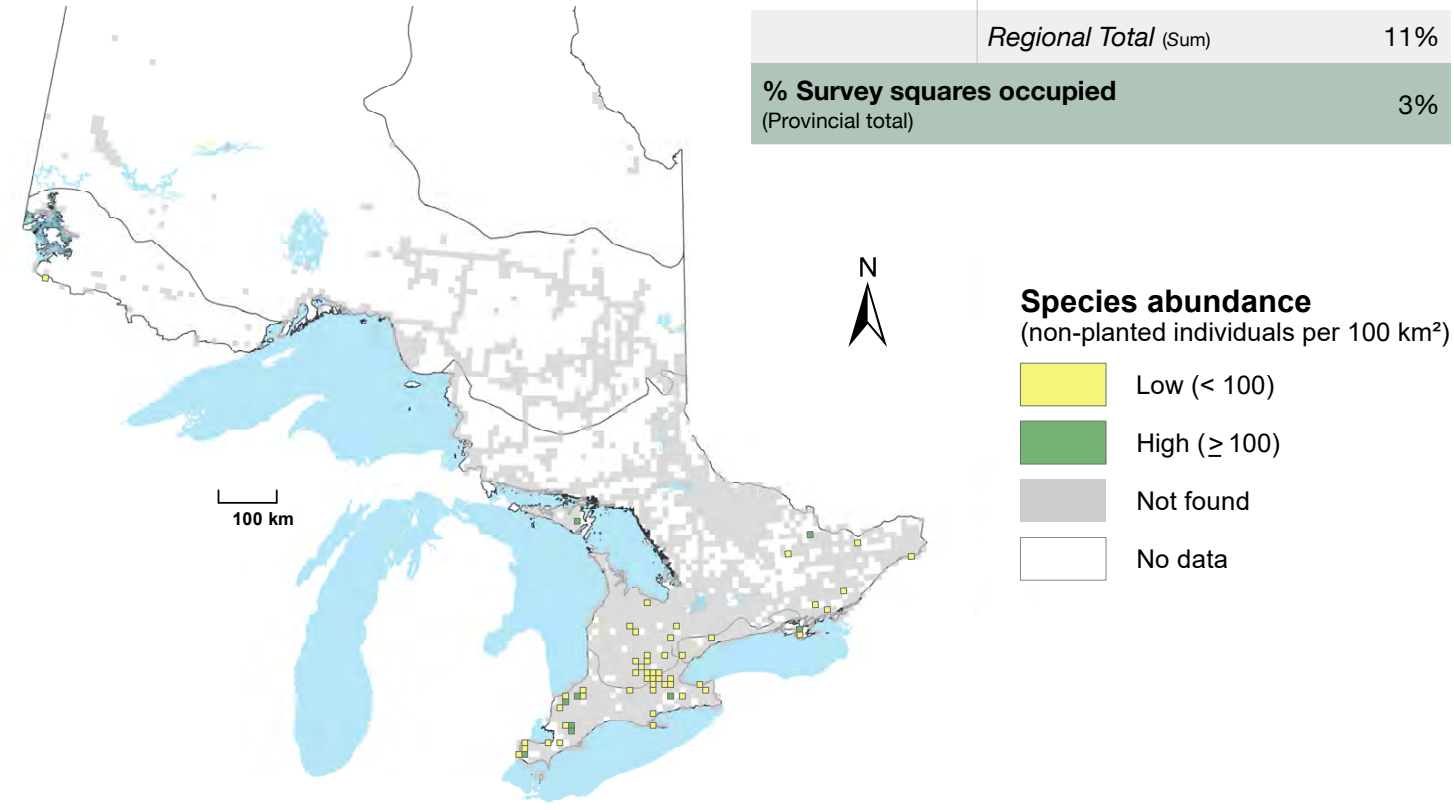
Native to Ontario

Reported distribution: The distribution of American plum was limited to areas below about 46°N latitude. The species was found in 11% of squares surveyed in the deciduous forest region. It was less common in the Great Lakes - St. Lawrence (2%) and was absent from the boreal forest region, a reflection of its southern distribution. We note that American plum is challenging to distinguish from Canada plum, which may impact the accuracy of the distribution displayed for this species.

Reported abundance: With their tendency to grow at low abundance (< 100 individuals per square) and relatively limited distribution (3% of surveyed squares occupied) American plum can be considered to be relatively uncommon in Ontario.

Table 72 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

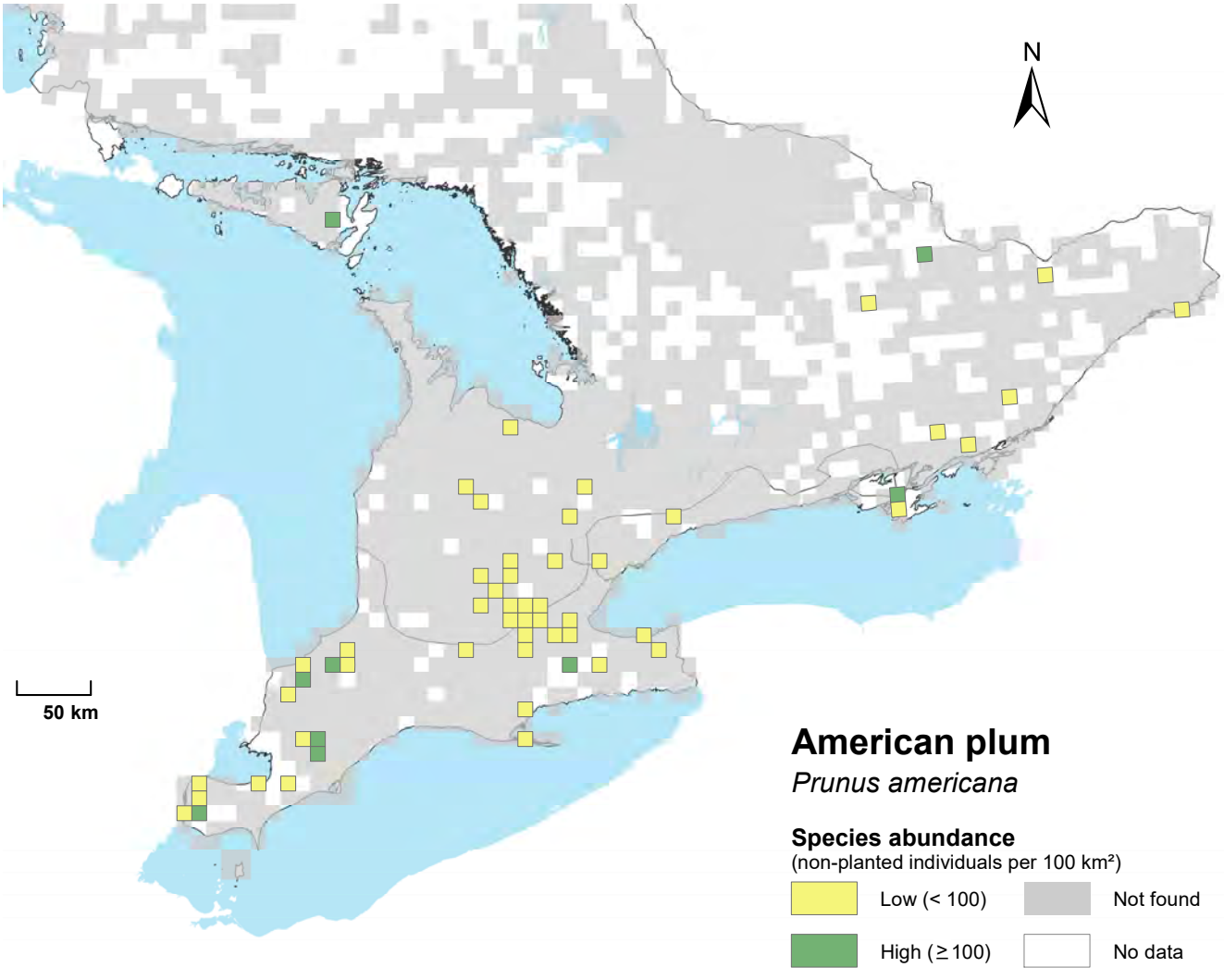
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	2%
Deciduous	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	11%
% Survey squares occupied (Provincial total)		3%



American plum | Prunier d'Amérique

Prunus americana

The reported distribution and abundance of American plum in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Sweet cherry | Cerisier des oiseaux

Prunus avium

Introduced to Ontario

Reported distribution: Sweet cherry had a patchy distribution that was limited to southern Ontario. The species was most commonly encountered in the deciduous forest region where it occupied 18% of squares surveyed. Most squares in which it was identified were in southwestern Ontario, below about 45°N latitude; however, sweet cherry was also observed in two isolated squares in the east of the province.

Reported abundance: Sweet cherry is not particularly abundant in Ontario due to its fairly limited distribution and tendency to grow at low abundance (< 100 individuals per survey square).

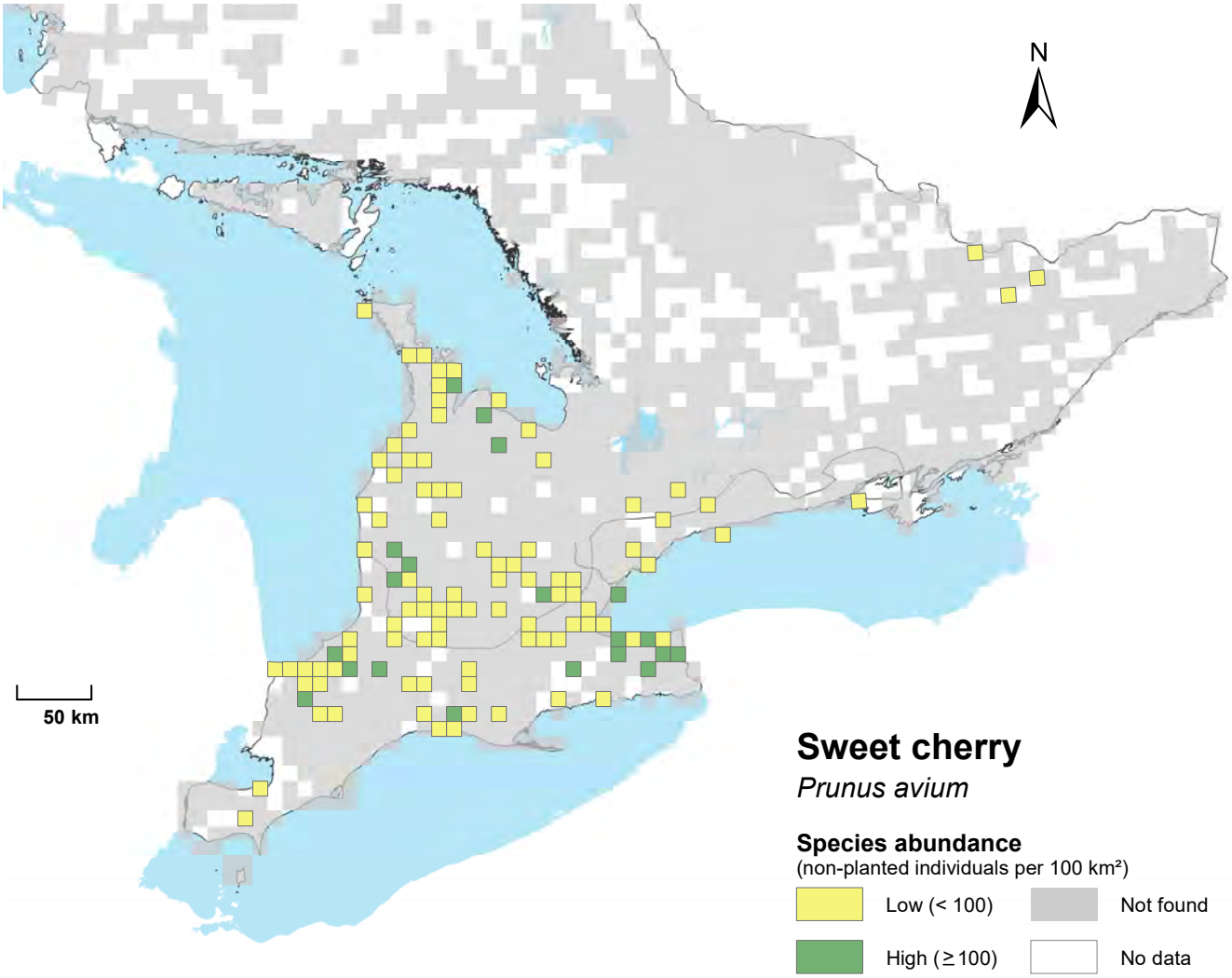
Table 73 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	4%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	5%
Deciduous	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	18%
% Survey squares occupied (Provincial total)		6%

Sweet cherry | Cerisier des oiseaux

Prunus avium

The reported distribution and abundance of sweet cherry in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Canada plum | Prunier noir

Prunus nigra

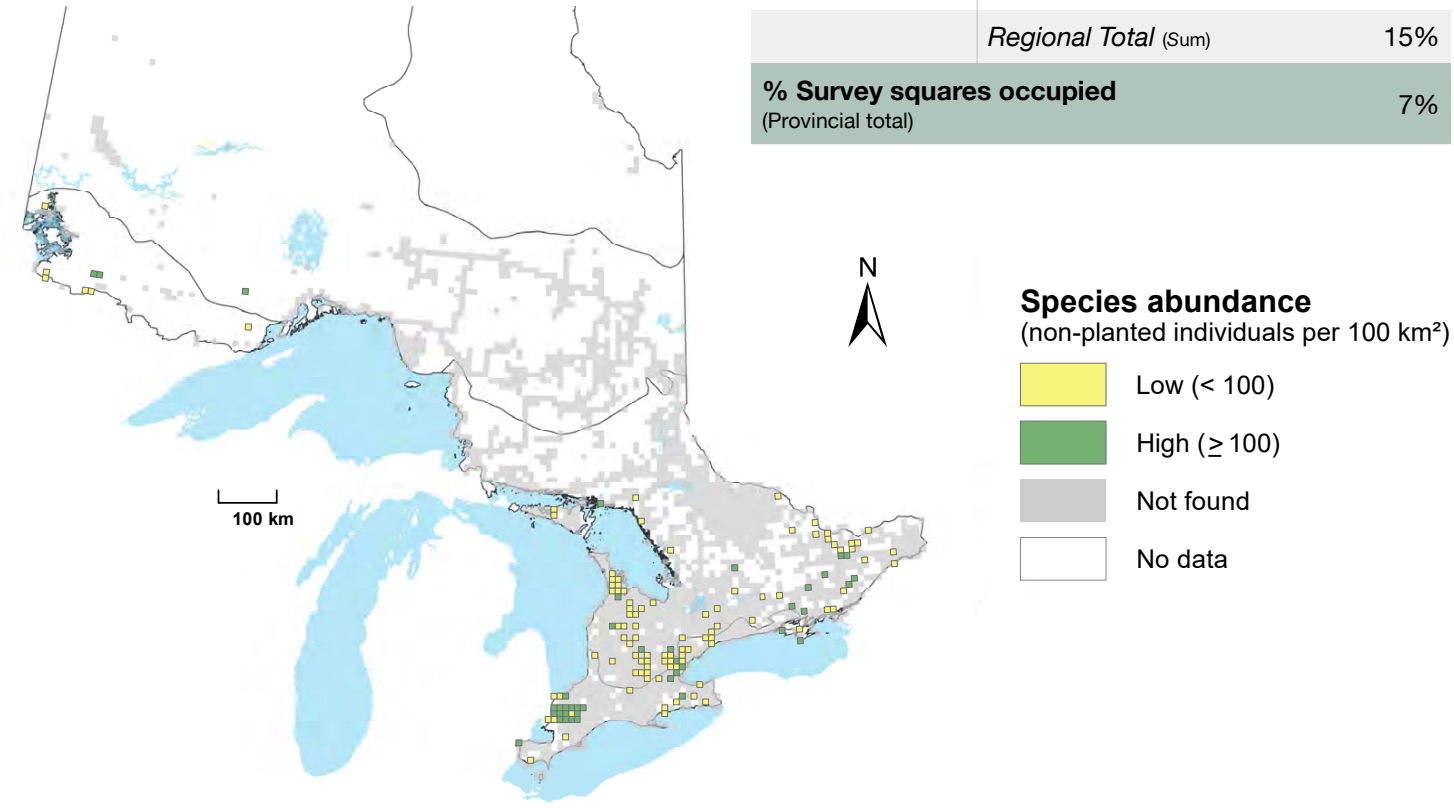
Native to Ontario

Reported distribution: Canada plum was identified throughout southern Ontario, including a cluster of survey squares in the southwest of the province. The species was most common in the deciduous forest region (15% of survey squares occupied) and was found in only one survey square in the boreal forest region. Canada plum is challenging to distinguish from American plum, which may impact the accuracy of the distribution displayed for this species.

Reported abundance: Canada plum had a low to moderate abundance in Ontario due to its tendency to grow in low numbers (< 100 individuals per square) and its patchy distribution. The highest local abundance of the species was in a cluster of survey squares in the southwest of the province.

Table 74 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

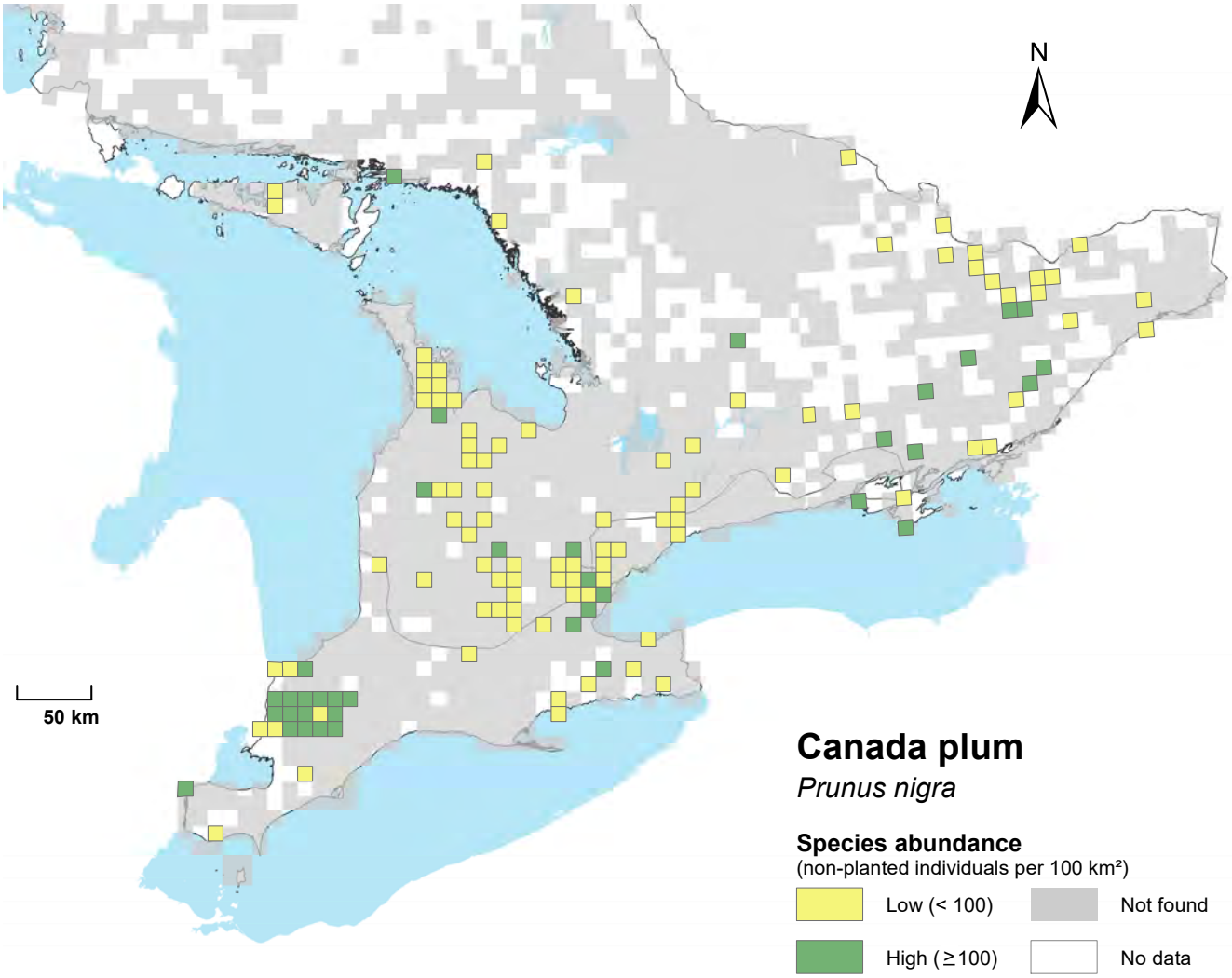
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	6%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	8%
Deciduous	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	7%
	Regional Total (Sum)	15%
% Survey squares occupied (Provincial total)		7%



Canada plum | Prunier noir

Prunus nigra

The reported distribution and abundance of Canada plum in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Pin cherry | Cerisier de Pennsylvanie

Prunus pensylvanica

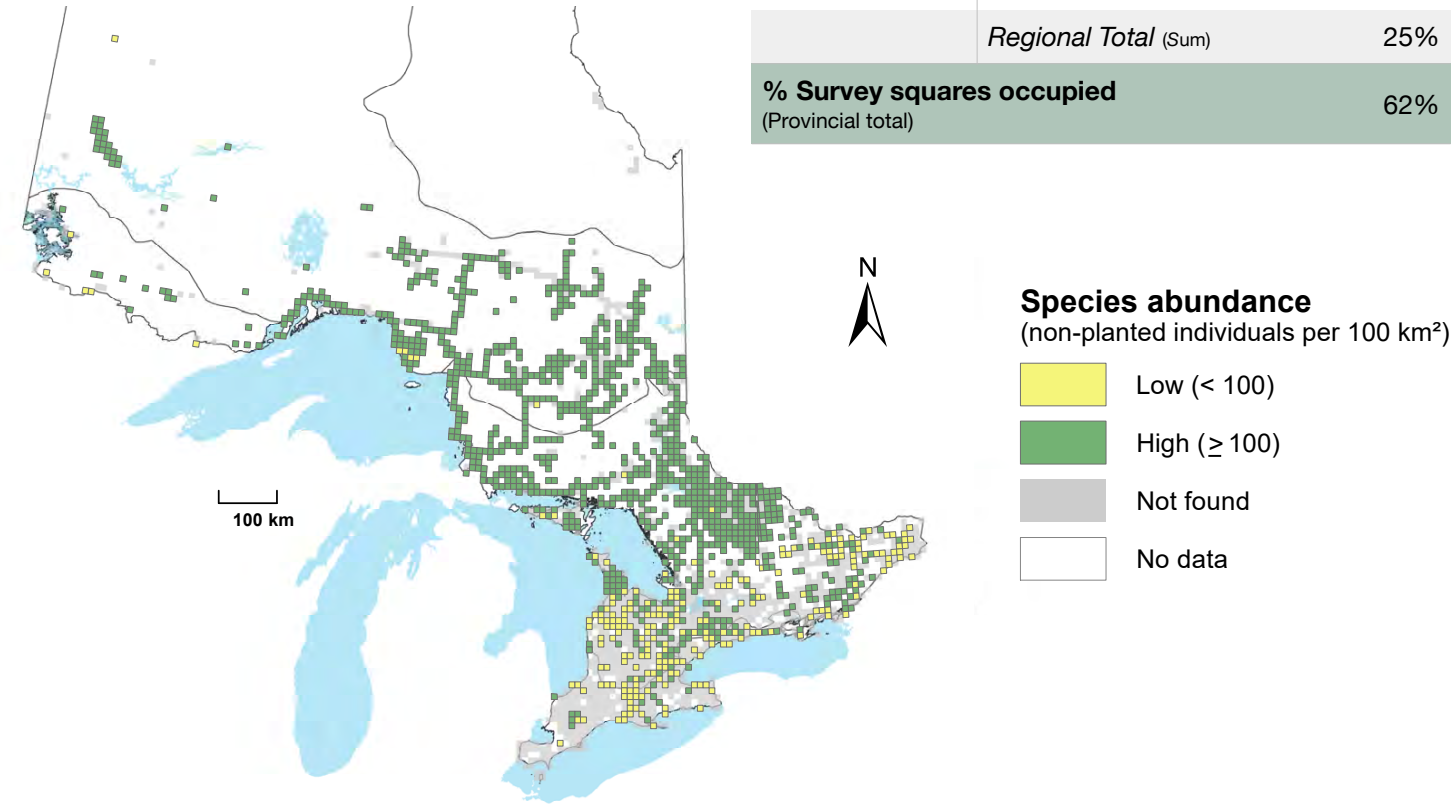
Native to Ontario

Reported distribution: The distribution of pin cherry was observed to extend across all three forest regions. The species was most common in the boreal and Great Lakes - St. Lawrence forest regions where it occupied 82% and 65% of squares surveyed. The distribution of pin cherry in the south and southwest of the province was more discontinuous than it was to the north.

Reported abundance: With its widespread distribution and tendency to grow at high abundance (≥ 100 individuals), pin cherry can be considered a fairly common species in Ontario. The northern distribution of pin cherry, which is known to grow at higher latitudes in the province, is not fully captured by Tree Atlas surveys.

Table 75 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

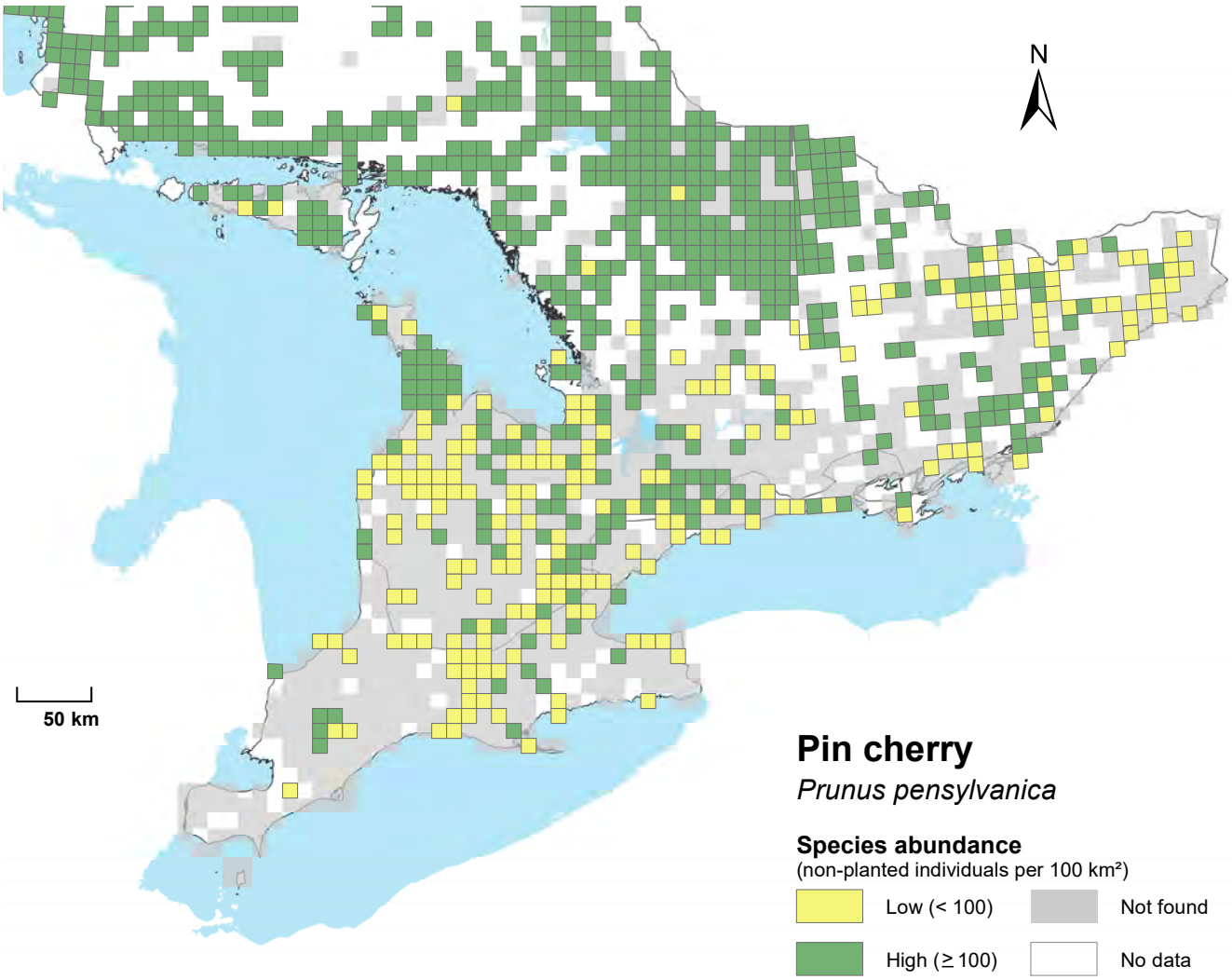
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	81%
	Regional Total (Sum)	82%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	51%
	Regional Total (Sum)	65%
Deciduous	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	8%
	Regional Total (Sum)	25%
% Survey squares occupied (Provincial total)		62%



Pin cherry | Cerisier de Pennsylvanie

Prunus pensylvanica

The reported distribution and abundance of pin cherry in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Black cherry | Cerisier tardif

Prunus serotina

Native to Ontario

Reported distribution: The distribution of black cherry was found to lie almost entirely below 46°N latitude. Its occurrence was relatively continuous throughout this area but was somewhat patchy in the eastern region of the province. Black cherry was not observed in survey squares in the boreal forest region.

Reported abundance: Black cherry was relatively common throughout its range and occurred in 37% of total squares surveyed. It grew at high abundance in just over half of the square in which it was observed.

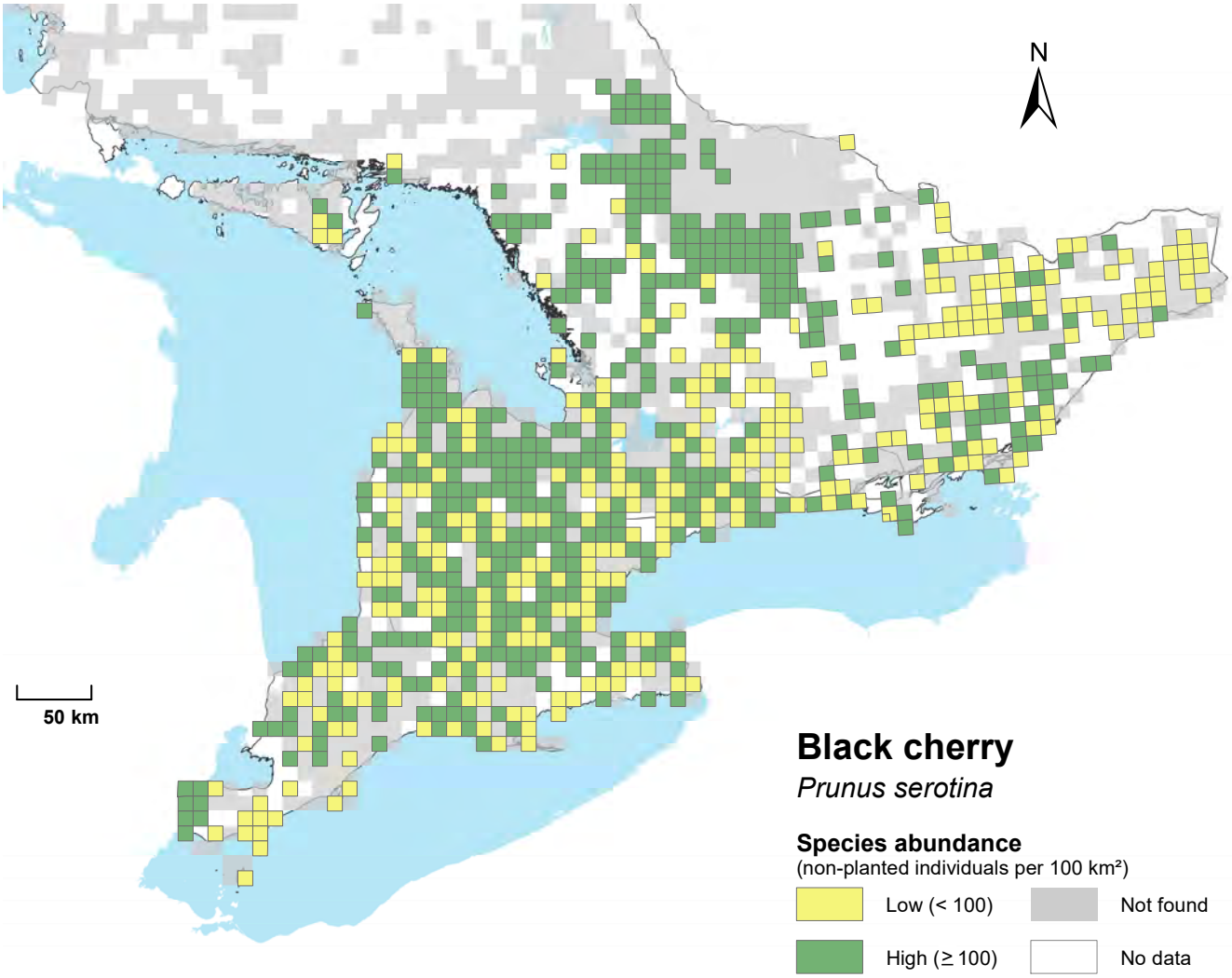
Table 76 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	28%
	Regional Total (Sum)	45%
Deciduous	Low (< 100 per 100 km²)	33%
	High (≥ 100 per 100 km²)	34%
	Regional Total (Sum)	67%
% Survey squares occupied (Provincial total)		37%

Black cherry | Cerisier tardif

Prunus serotina

The reported distribution and abundance of black cherry in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Chokecherry | Cerisier de Virginie

Prunus virginiana

Native to Ontario

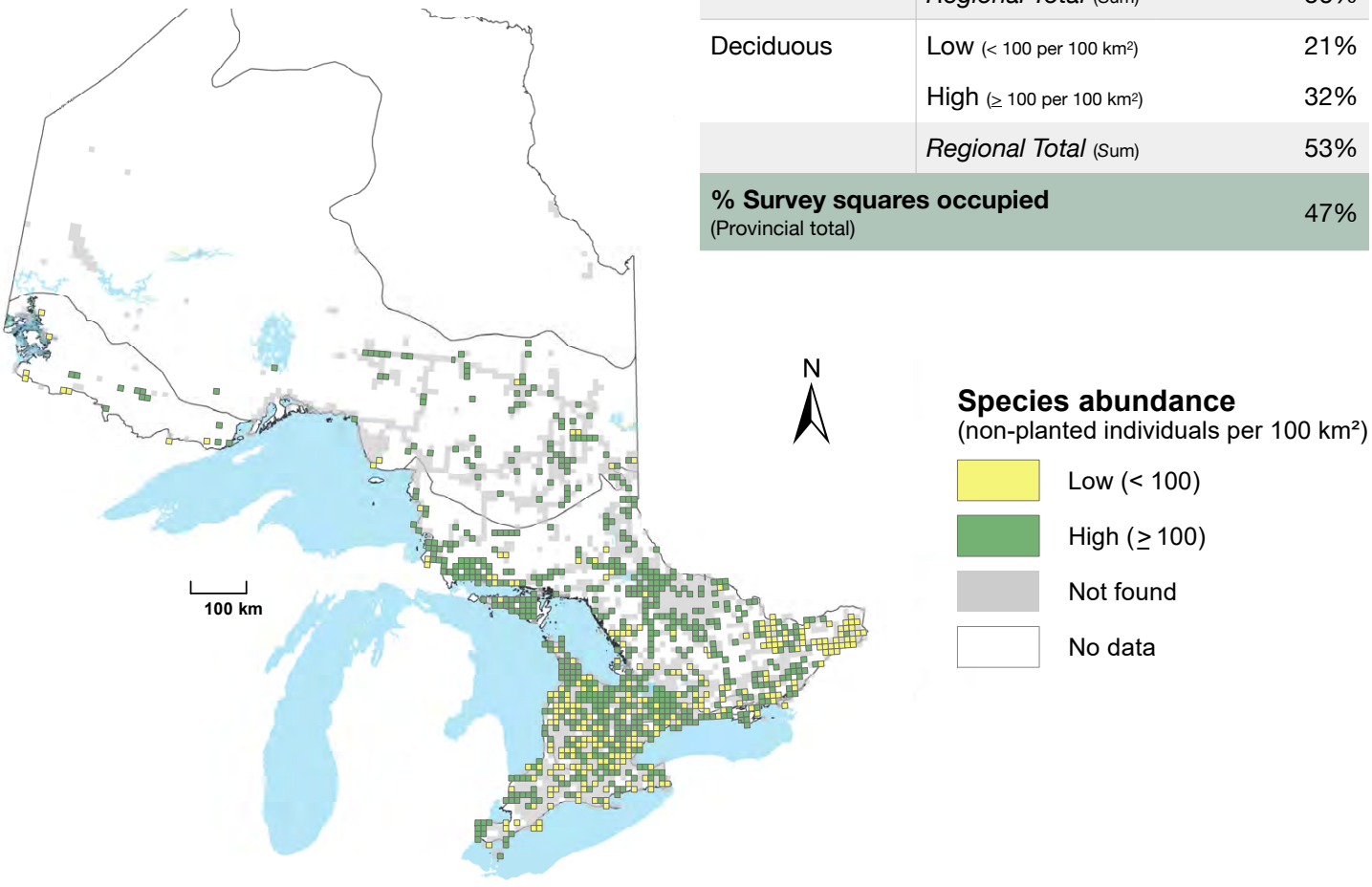
Reported distribution: Chokecherry was observed in survey squares located in all three forest regions. Although the species was widespread, its distribution was fairly discontinuous. Chokecherry was identified in just under half of the squares surveyed in Ontario.

Reported abundance: Due to its wide distribution and ability to grow at high abundance (≥ 100 individuals per survey square), chokecherry can be considered a common species in Ontario.

The northern distribution of chokecherry is not fully captured by the Tree Atlas surveys.

Table 77 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

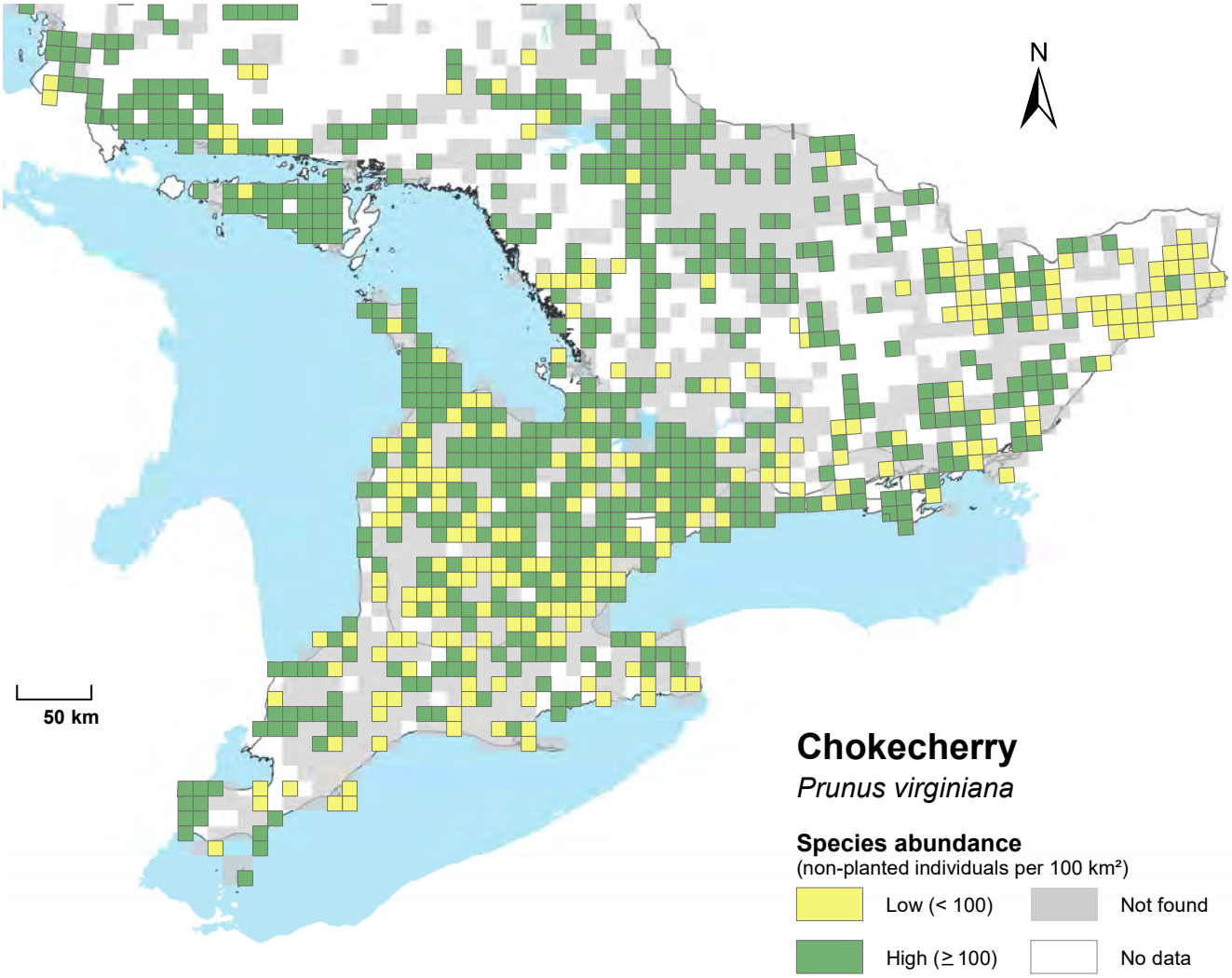
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	17%
	Regional Total (Sum)	18%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	15%
	High (≥ 100 per 100 km²)	41%
	Regional Total (Sum)	56%
Deciduous	Low (< 100 per 100 km²)	21%
	High (≥ 100 per 100 km²)	32%
	Regional Total (Sum)	53%
% Survey squares occupied (Provincial total)		47%



Chokecherry | Cerisier de Virginie

Prunus virginiana

The reported distribution and abundance of chokecherry in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Common hop-tree | Ptéléa trifolié

Ptelea trifoliata

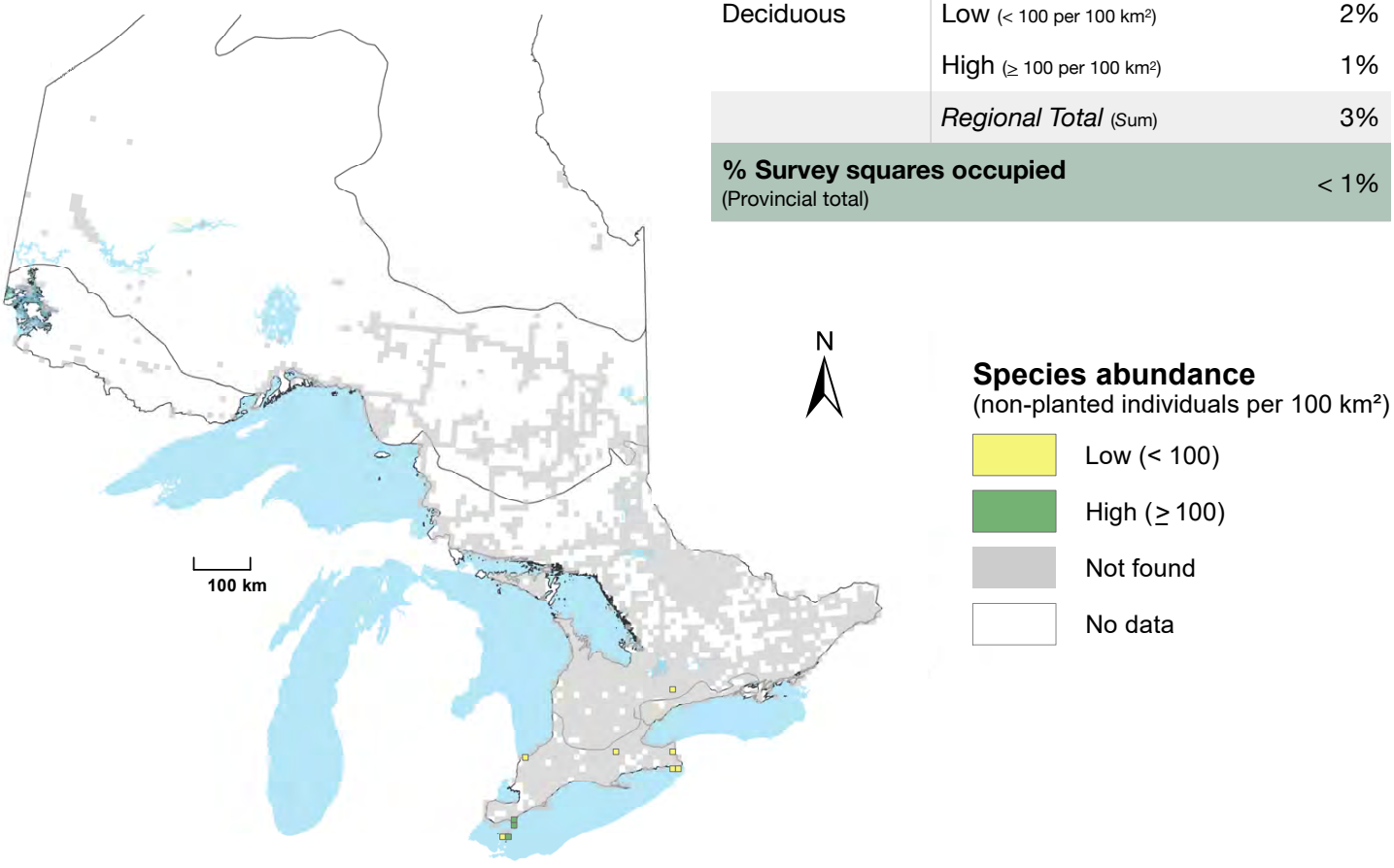
Native to Ontario

Reported distribution: Common hop-tree had a very limited distribution in Ontario that lay almost entirely within the deciduous forest region. The species occurred in just under 1% of squares surveyed in the Great Lake - St. Lawrence forest region and was absent from the boreal forest. Squares in which common hop-tree was observed tended to occur in relatively isolated groups.

Reported abundance: Common hop-tree was, ironically, very *uncommon* in Ontario, where it is listed as a threatened species. The species tended to occur at low abundance (< 100 individuals) within its geographically-limited range.

Table 78 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

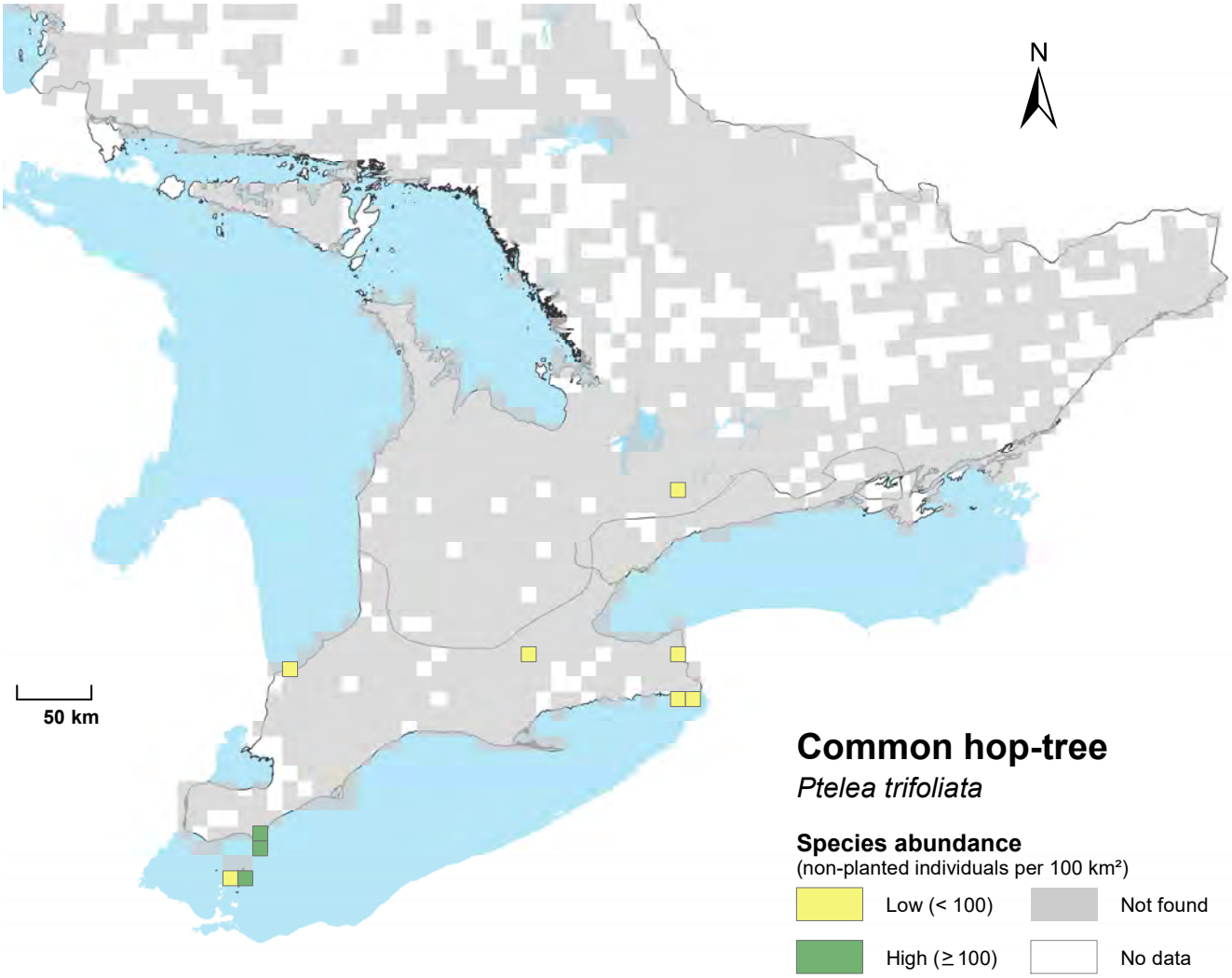
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	3%
% Survey squares occupied (Provincial total)		< 1%



Common hop-tree | Ptéléa trifolié

Ptelea trifoliata

The reported distribution and abundance of common hop-tree in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

White oak | Chêne blanc

Quercus alba

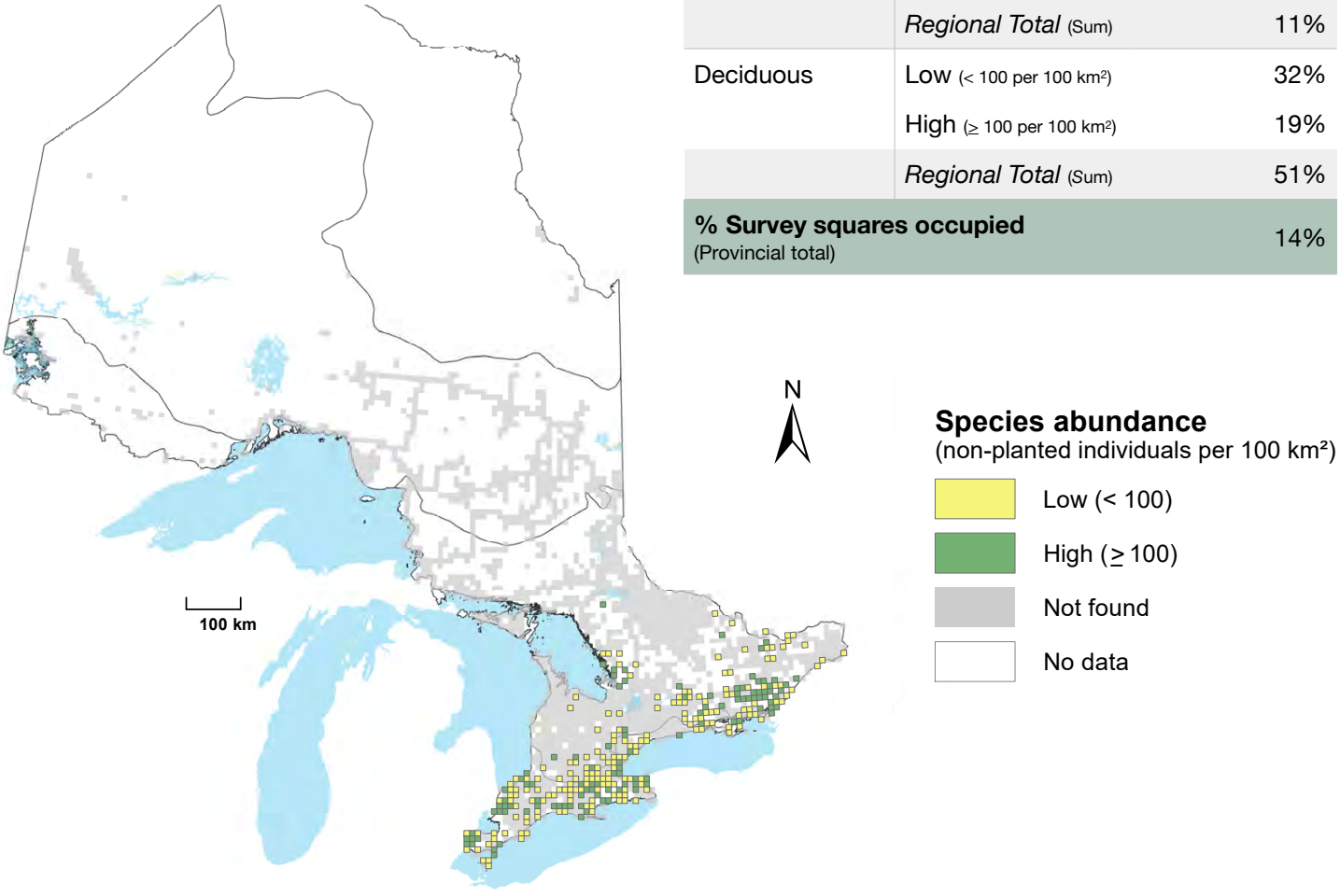
Native to Ontario

Reported distribution: The distribution of white oak occurred in a band extending from southwestern to southeastern Ontario. Within this area, the species occupied 51% of squares surveyed in the deciduous forest region and 11% of squares in the Great Lakes - St. Lawrence forest region. White oak was absent from squares surveyed in the boreal forest.

Reported abundance: Within its distribution, white oak tended to grow at low abundance (< 100 individuals) and can be described as having a low to moderate overall abundance in the province.

Table 79 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

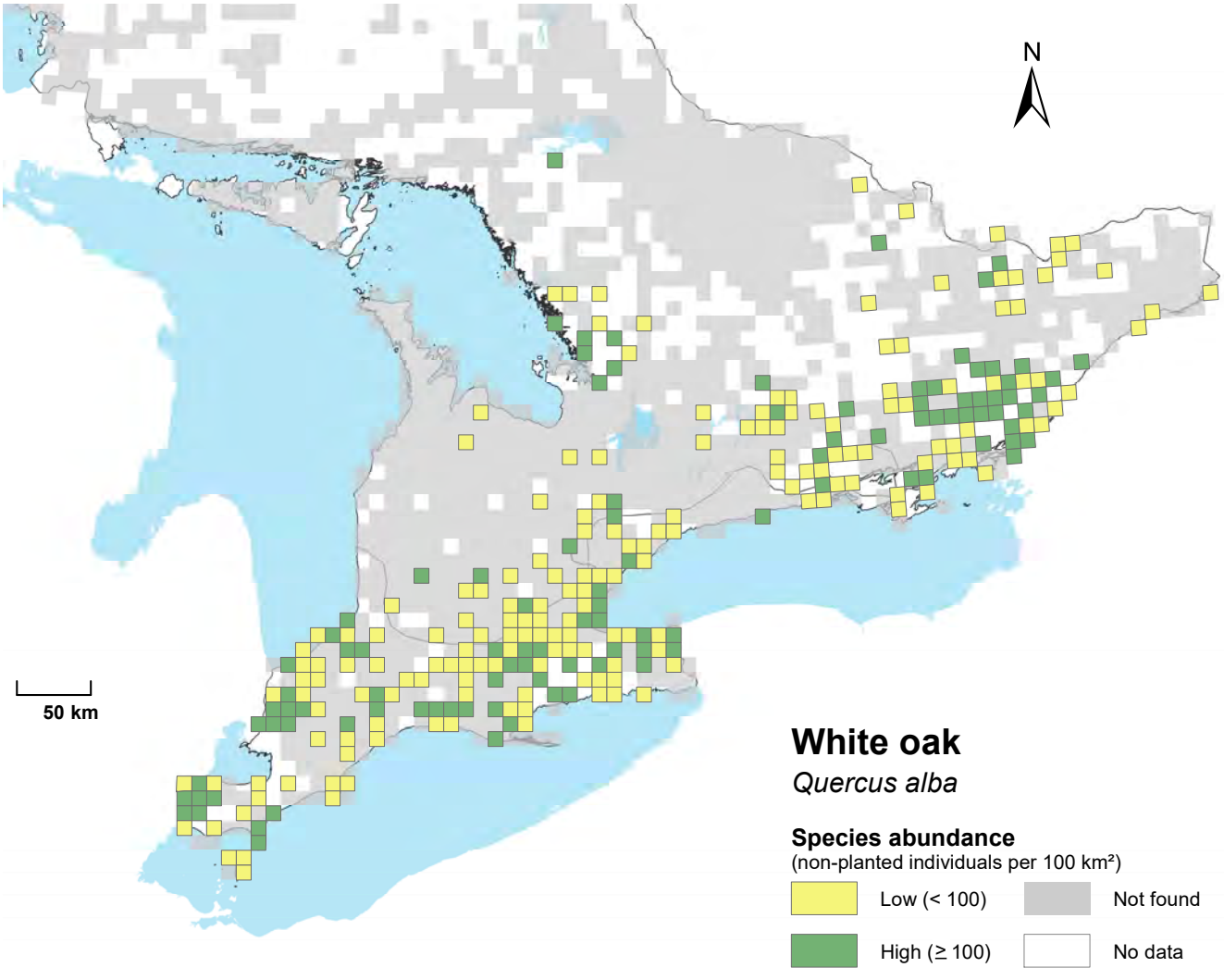
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	4%
	Regional Total (Sum)	11%
Deciduous	Low (< 100 per 100 km²)	32%
	High (≥ 100 per 100 km²)	19%
	Regional Total (Sum)	51%
% Survey squares occupied (Provincial total)		14%



White oak | Chêne blanc

Quercus alba

The reported distribution and abundance of white oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Swamp white oak | Chêne bicolore

Quercus bicolor

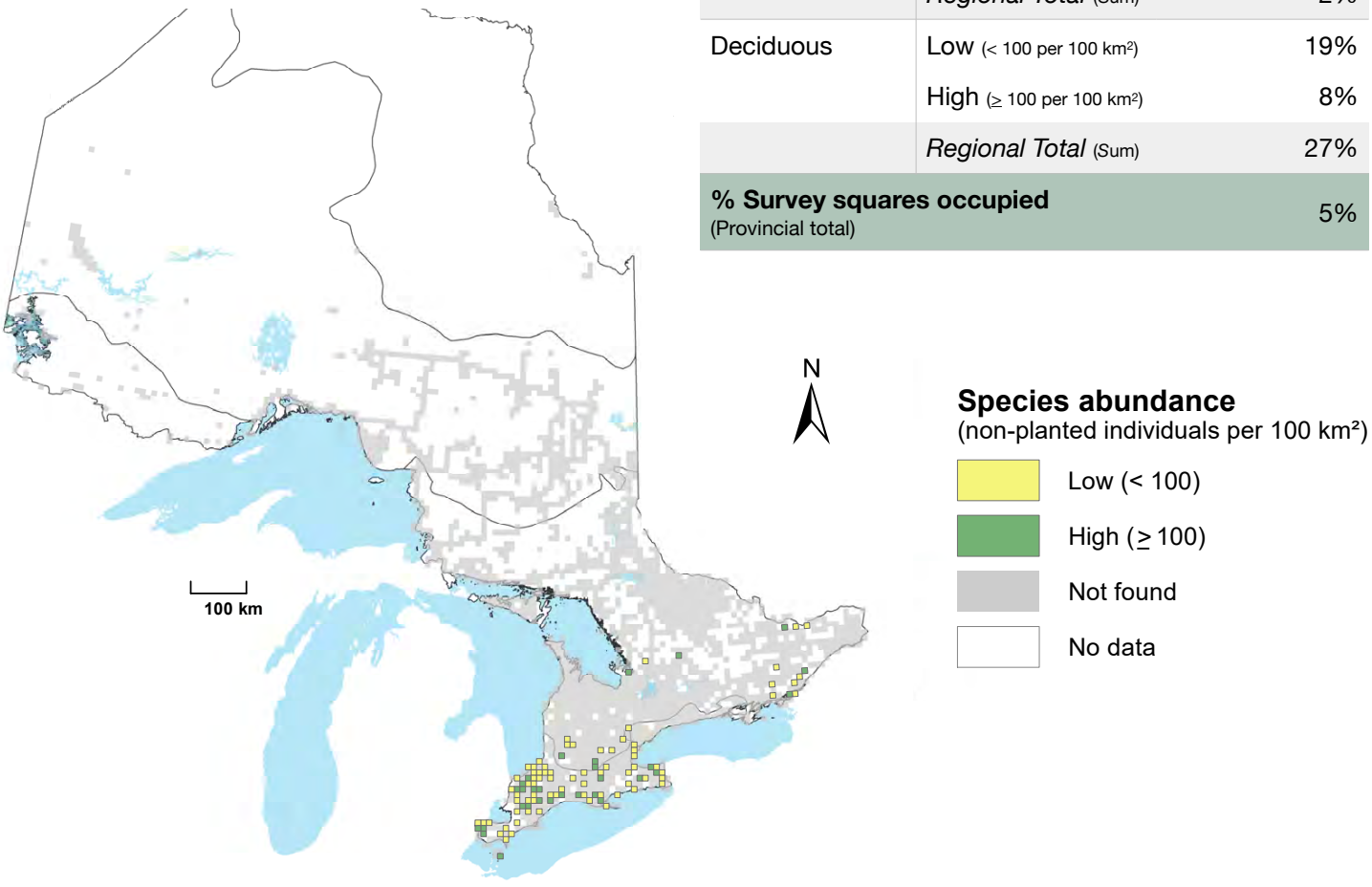
Native to Ontario

Reported distribution: Swamp white oak was mainly identified in the southwest of the province, although it was also observed in isolated survey squares in the southeastern region. The species occurred in 27% and 2% of squares surveyed in the deciduous and Great Lakes - St. Lawrence forest regions.

Reported abundance: Swamp white oak was identified in only 5% of squares surveyed in Ontario and generally grew at low abundance (< 100 individuals). The species was fairly abundant in southwestern Ontario but relatively uncommon at the provincial level.

Table 80 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

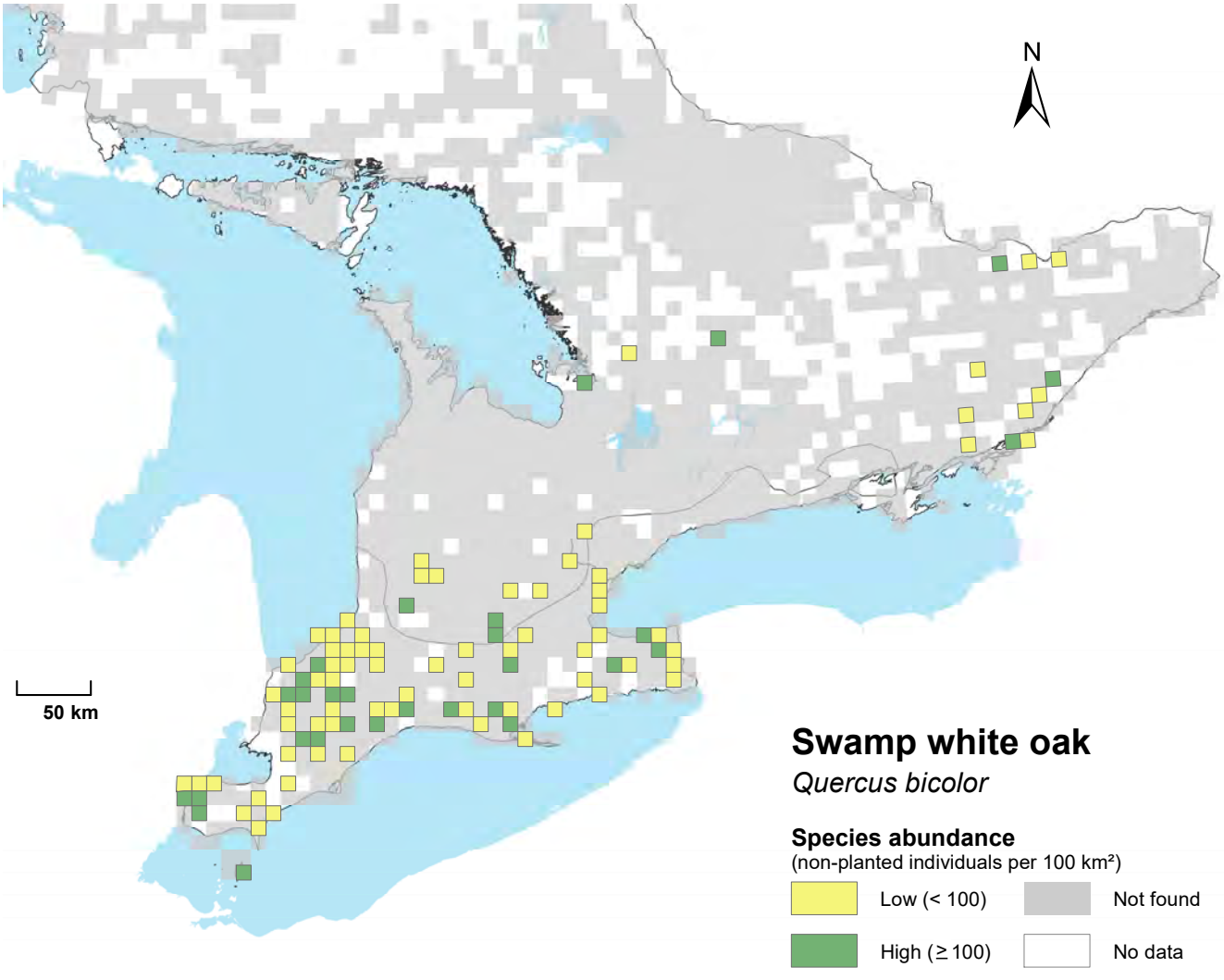
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	2%
Deciduous	Low (< 100 per 100 km²)	19%
	High (≥ 100 per 100 km²)	8%
	Regional Total (Sum)	27%
% Survey squares occupied (Provincial total)		5%



Swamp white oak | Chêne bicolore

Quercus bicolor

The reported distribution and abundance of swamp white oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Hill's oak | Chêne ellipsoïdal

Quercus ellipsoidalis

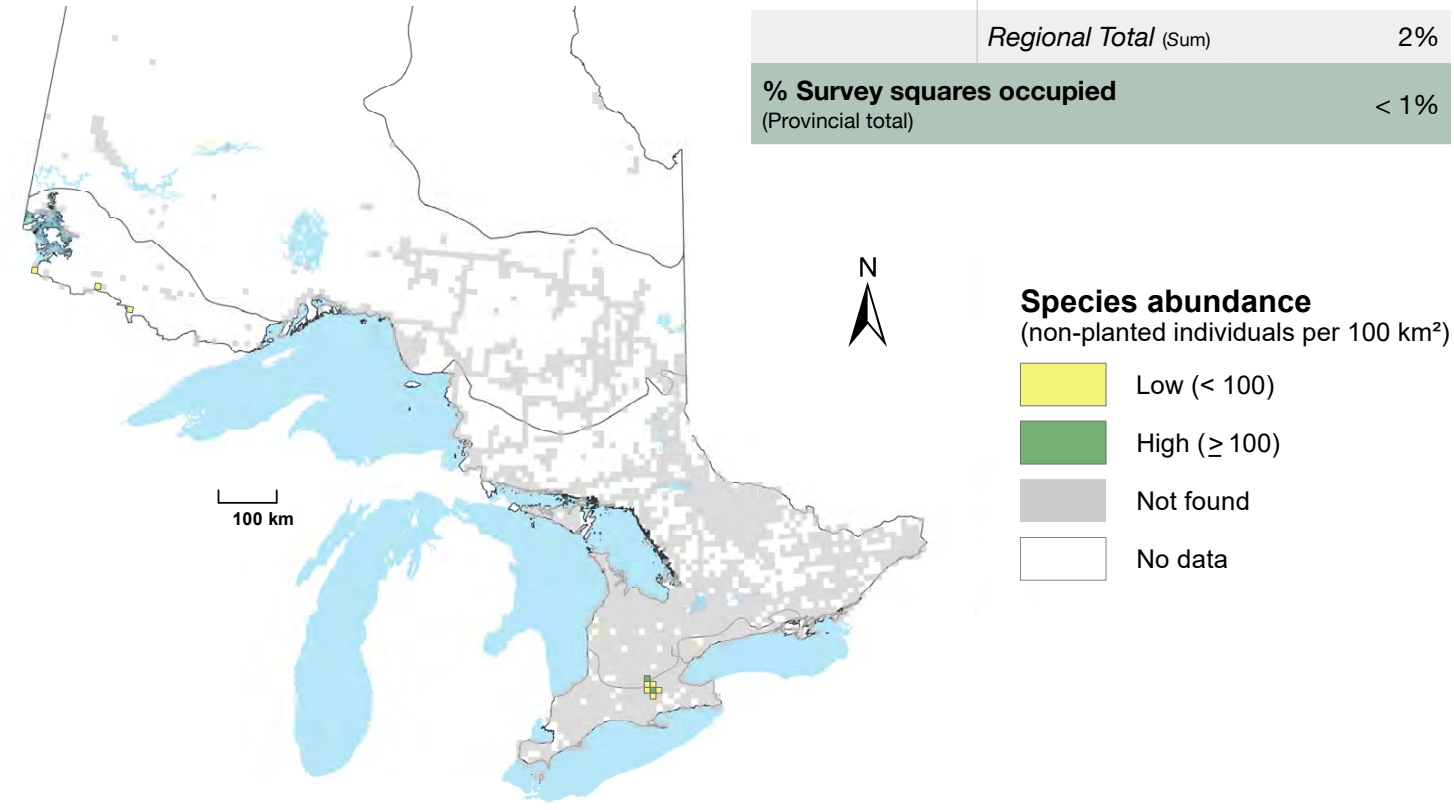
Native to Ontario

Reported distribution: The global distribution of Hill's oak chiefly spans the western side of the Great Lakes, with two very disjunct populations occurring in Ontario: one clustered in southwestern Ontario and the other near Kenora in northern Ontario, west of Lake Superior. More recent observations have noted a slight expansion of the southwestern Ontario population that is not reflected on these maps. The species was observed in 2% of squares surveyed in the deciduous forest region and in < 1% of squares at the provincial level.

Reported abundance: Owing to its small distribution and tendency to grow at low abundance (< 100 individuals), Hill's oak can be considered a rare tree species in Ontario.

Table 81 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

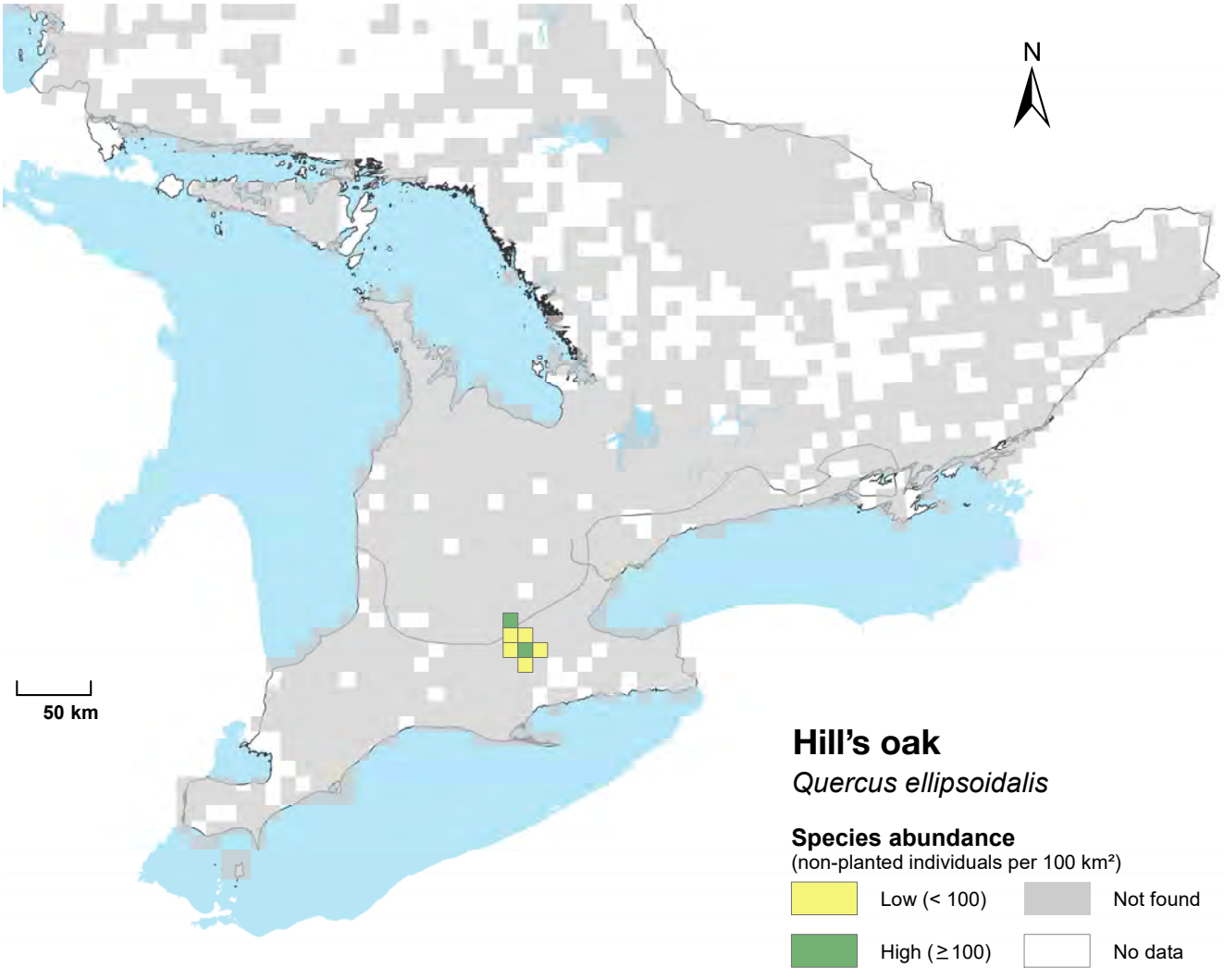
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	2%
% Survey squares occupied (Provincial total)		< 1%



Hill's oak | Chêne ellipsoïdal

Quercus ellipsoidalis

The reported distribution and abundance of Hill's oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Bur oak | Chêne à gros fruits

Quercus macrocarpa

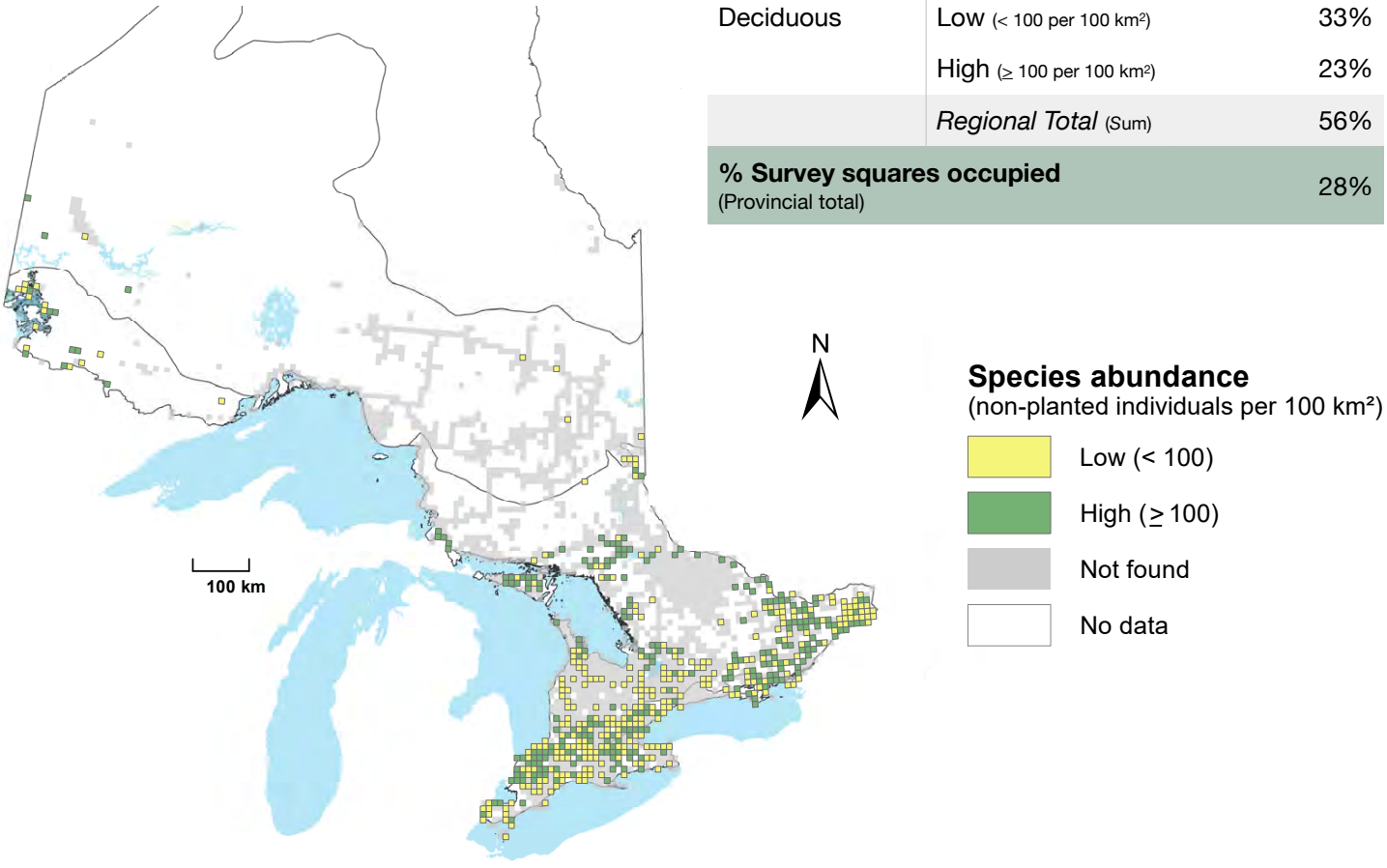
Native to Ontario

Reported distribution: Bur oak was identified in all three surveyed forest regions; however, the species' distribution became increasingly patchy in central and northern Ontario compared to the southern portion of the province. Bur oak occupied 56% of squares surveyed in the deciduous forest region and 2% of squares in the boreal forest region.

Reported abundance: Bur oak was moderately abundant at the provincial level and was observed in 28% of all squares surveyed. The species was more common in southern Ontario and was less frequently encountered in the northern portion of its range.

Table 82 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

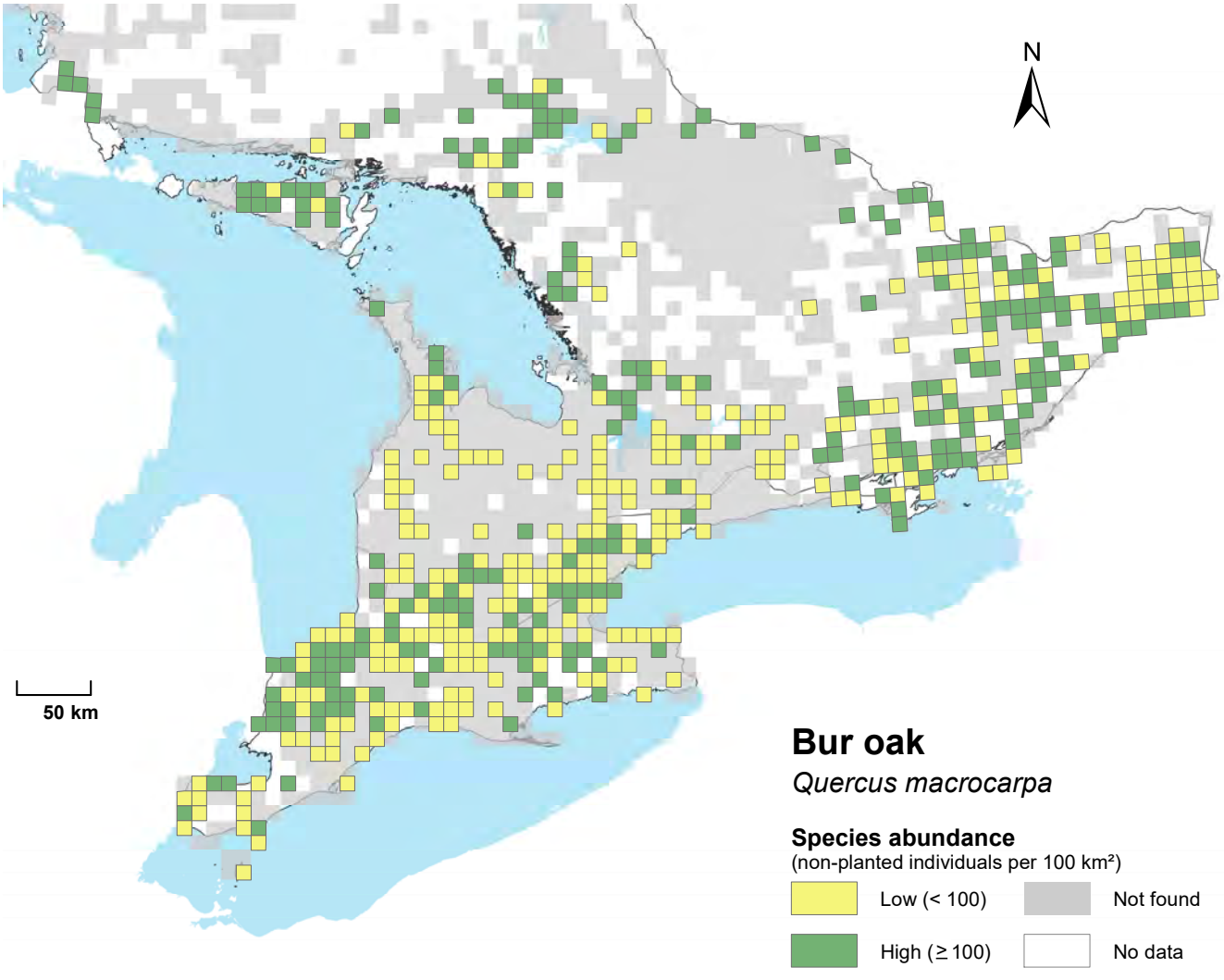
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	2%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	15%
	Regional Total (Sum)	32%
Deciduous	Low (< 100 per 100 km²)	33%
	High (≥ 100 per 100 km²)	23%
	Regional Total (Sum)	56%
% Survey squares occupied (Provincial total)		28%



Bur oak | Chêne à gros fruits

Quercus macrocarpa

The reported distribution and abundance of bur oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Chinquapin oak | Chêne jaune

Quercus muehlenbergii

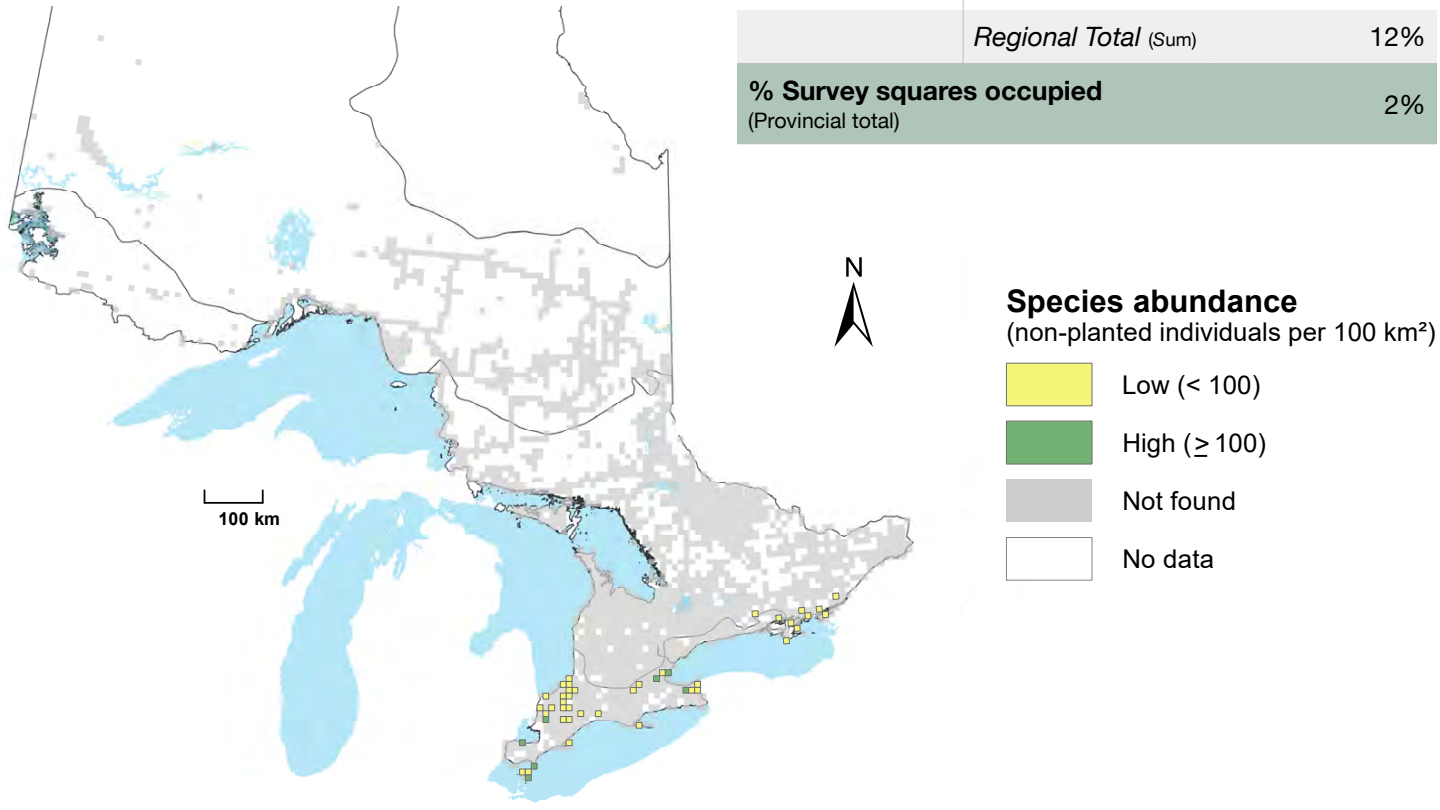
Native to Ontario

Reported distribution: Chinquapin oak had a relatively patchy distribution in Ontario. The species was most commonly encountered in the southwest of the province and in an area northwest of Lake Ontario. Chinquapin oak was observed in 12% of squares in the deciduous forest region, < 1% in the Great Lakes - St. Lawrence forest region, and was absent from the boreal forest.

Reported abundance: Chinquapin oak had a tendency to grow at low abundance (< 100 individuals) and was identified in only 2% of the squares surveyed. The species can therefore be considered to be relatively uncommon in Ontario.

Table 83 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

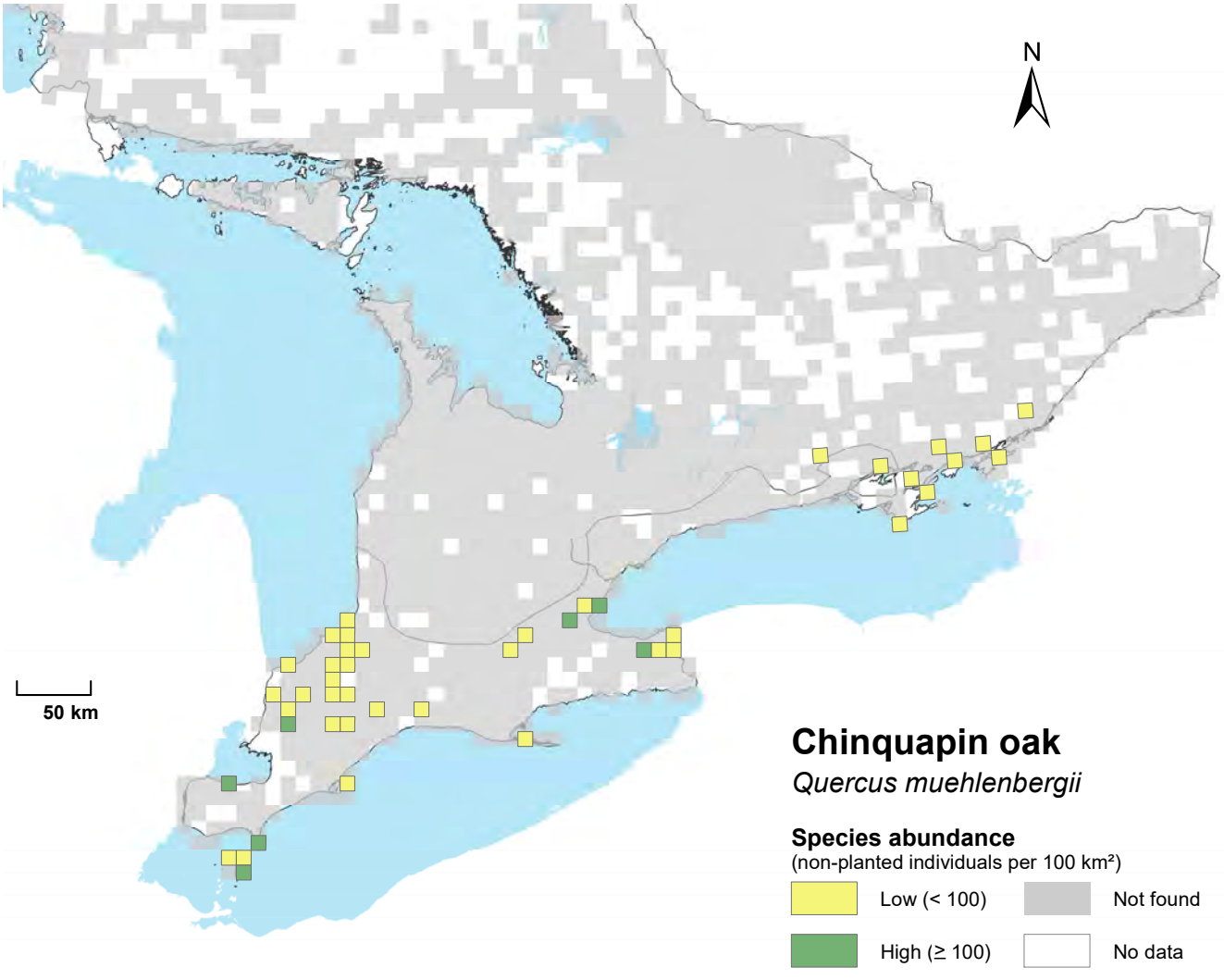
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		2%



Chinquapin oak | Chêne jaune

Quercus muehlenbergii

The reported distribution and abundance of chinquapin oak in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Pin oak | Chêne de marais

Quercus palustris

Native to Ontario

Reported distribution: Pin oak had a limited distribution in the province and was almost exclusively identified in the deciduous forest region of southwestern Ontario (9% of surveyed squares). Within its range, the species occurred in two main areas, to the northwest and northeast of Lake Erie.

Reported abundance: Pin oak was an uncommon species in Ontario. It had a limited and discontinuous distribution and tended to grow at low abundance (< 100 individuals per survey square).

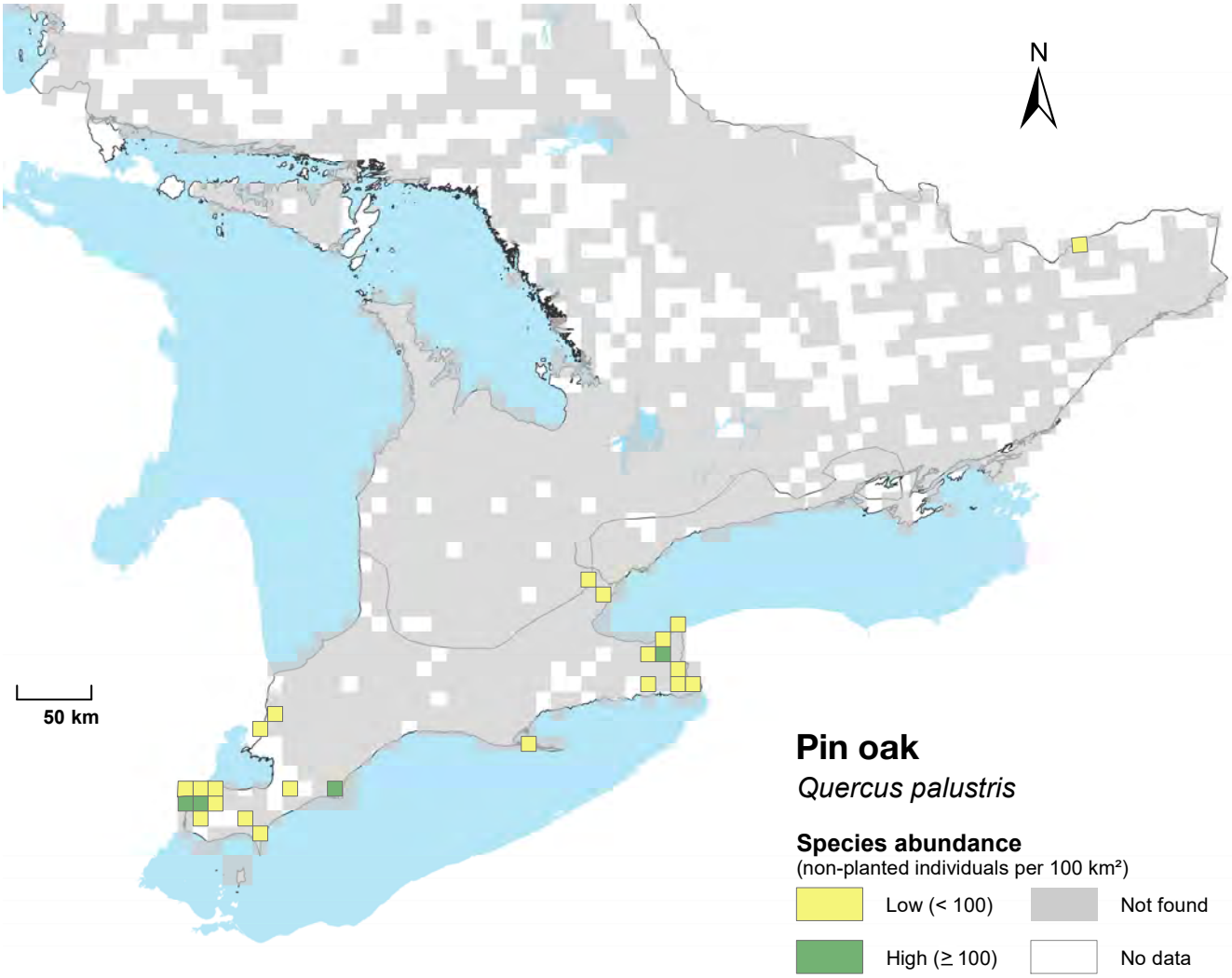
Table 84 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	9%
% Survey squares occupied (Provincial total)		1%

Pin oak | Chêne de marais

Quercus palustris

The reported distribution and abundance of pin oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Northern red oak | Chêne rouge

Quercus rubra

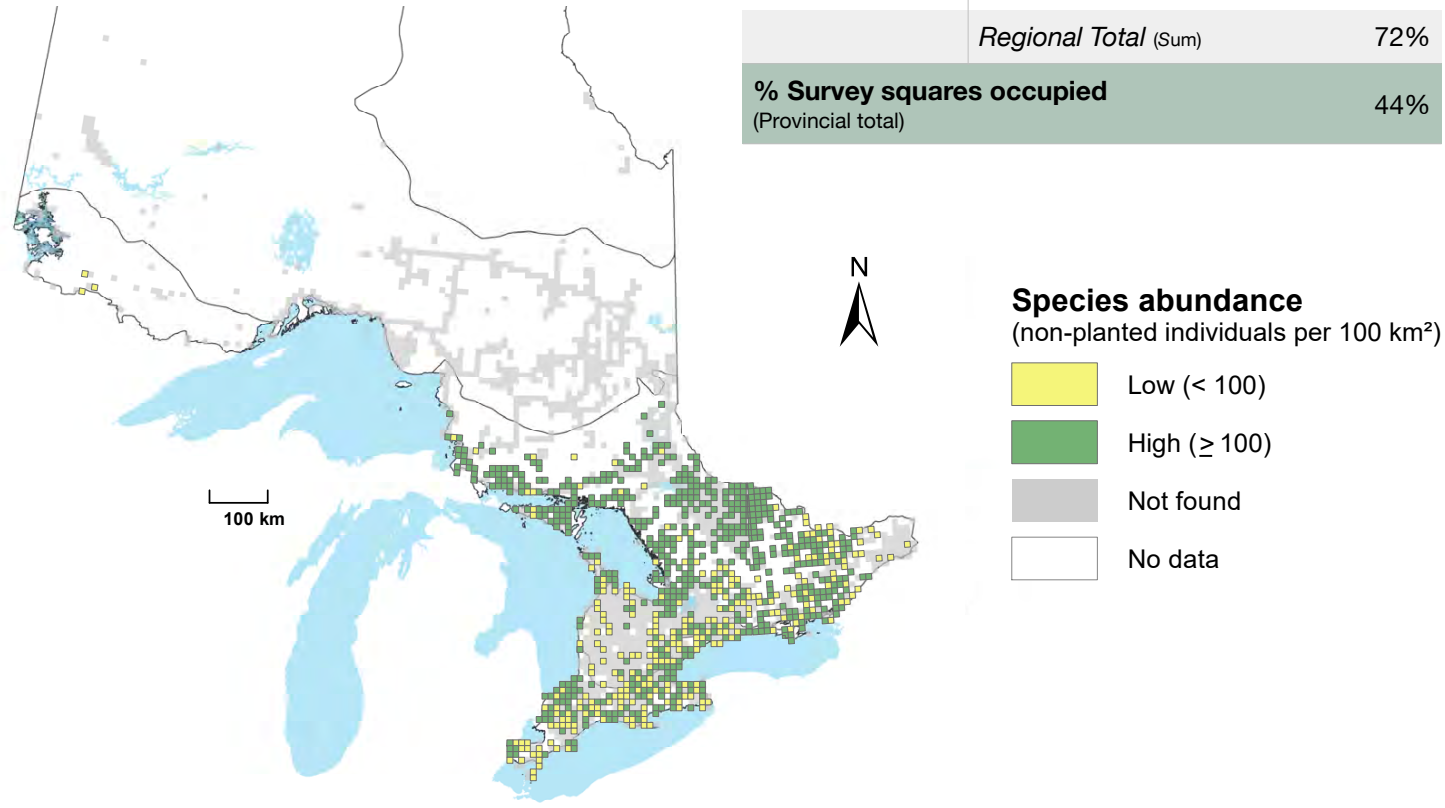
Native to Ontario

Reported distribution: The distribution of northern red oak was found to cover most of southern and central Ontario. The species was identified throughout the deciduous and Great Lakes - St. Lawrence forest regions where it occupied 72% and 55% of squares surveyed. The northern edge of the species' range occurred abruptly just south of the boreal forest region.

Reported abundance: Northern red oak was relatively abundant within its range in southern and central Ontario. Although absent from a number of survey squares within this area, the species was often observed to grow at high abundance (≥ 100 individuals), particularly within the Great Lakes - St. Lawrence forest region.

Table 85 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

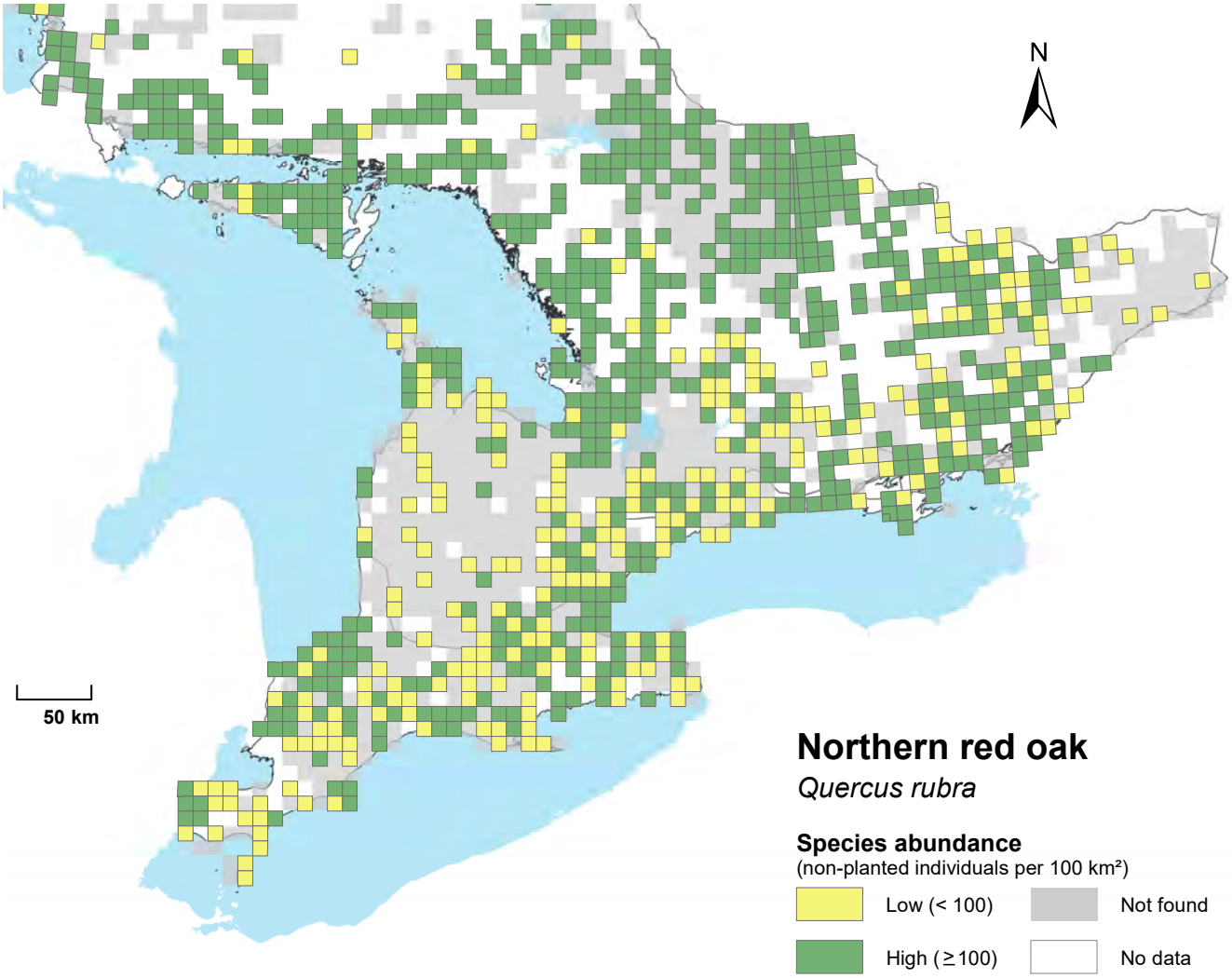
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	41%
	Regional Total (Sum)	55%
Deciduous	Low (< 100 per 100 km²)	33%
	High (≥ 100 per 100 km²)	39%
	Regional Total (Sum)	72%
% Survey squares occupied (Provincial total)		44%



Northern red oak | Chêne rouge

Quercus rubra

The reported distribution and abundance of northern red oak in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Shumard oak | Chêne de Shumard

Quercus shumardii

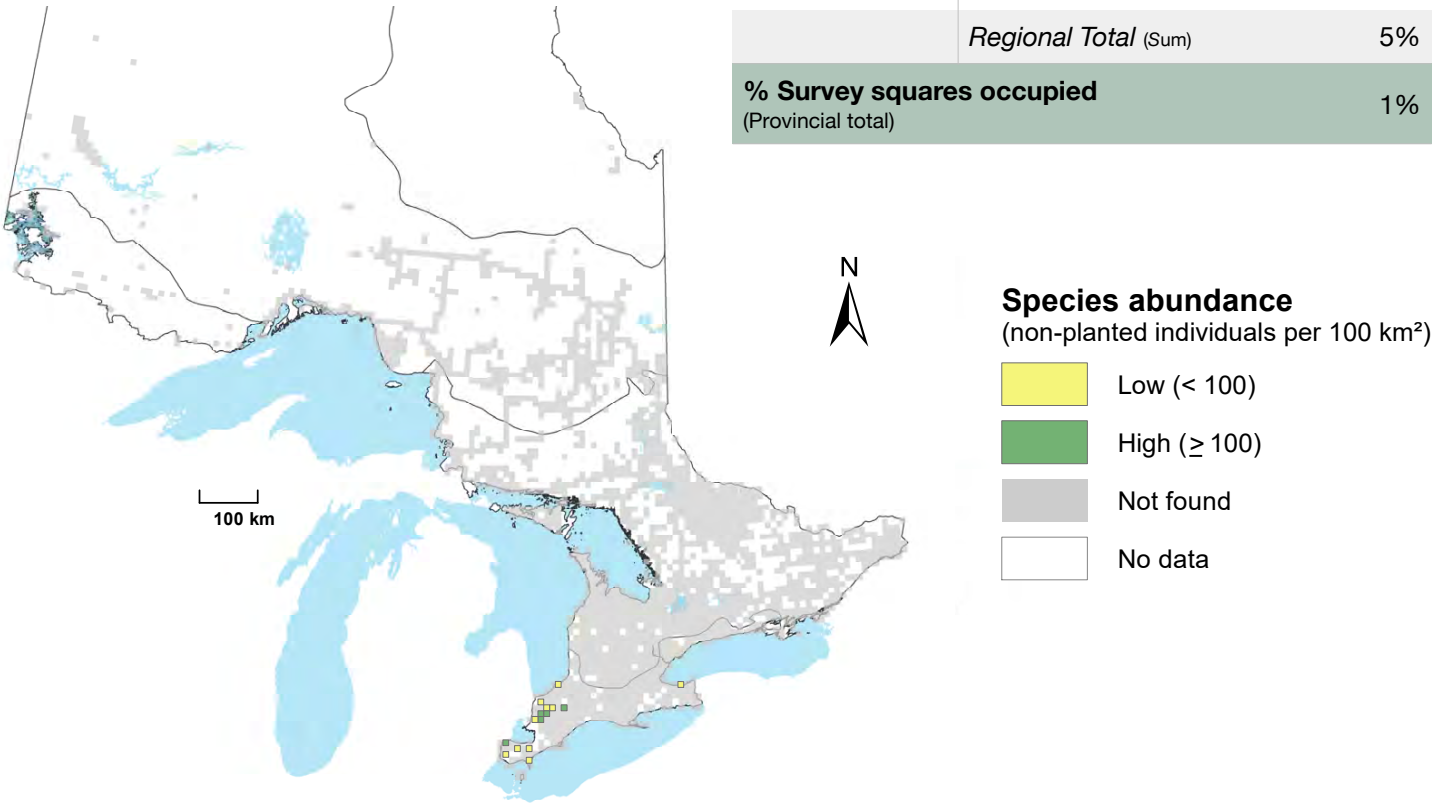
Native to Ontario

Reported distribution: Shumard oak was primarily identified in southwestern Ontario where it occupied 5% of the squares surveyed in the deciduous forest region. The species was also found in a lone survey square west of Lake Ontario. Trees reported in this area of the Niagara region require further study. Shumard oak was not observed in the Great Lakes - St. Lawrence or boreal forest regions.

Reported abundance: Shumard oak had a small distribution in Ontario and tended to grow at low abundance (< 100 individuals). These factors result in the species being very uncommon at the provincial level; Shumard oak is listed as a species of special concern in Ontario as it faces significant threats from habitat conversion.

Table 86 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

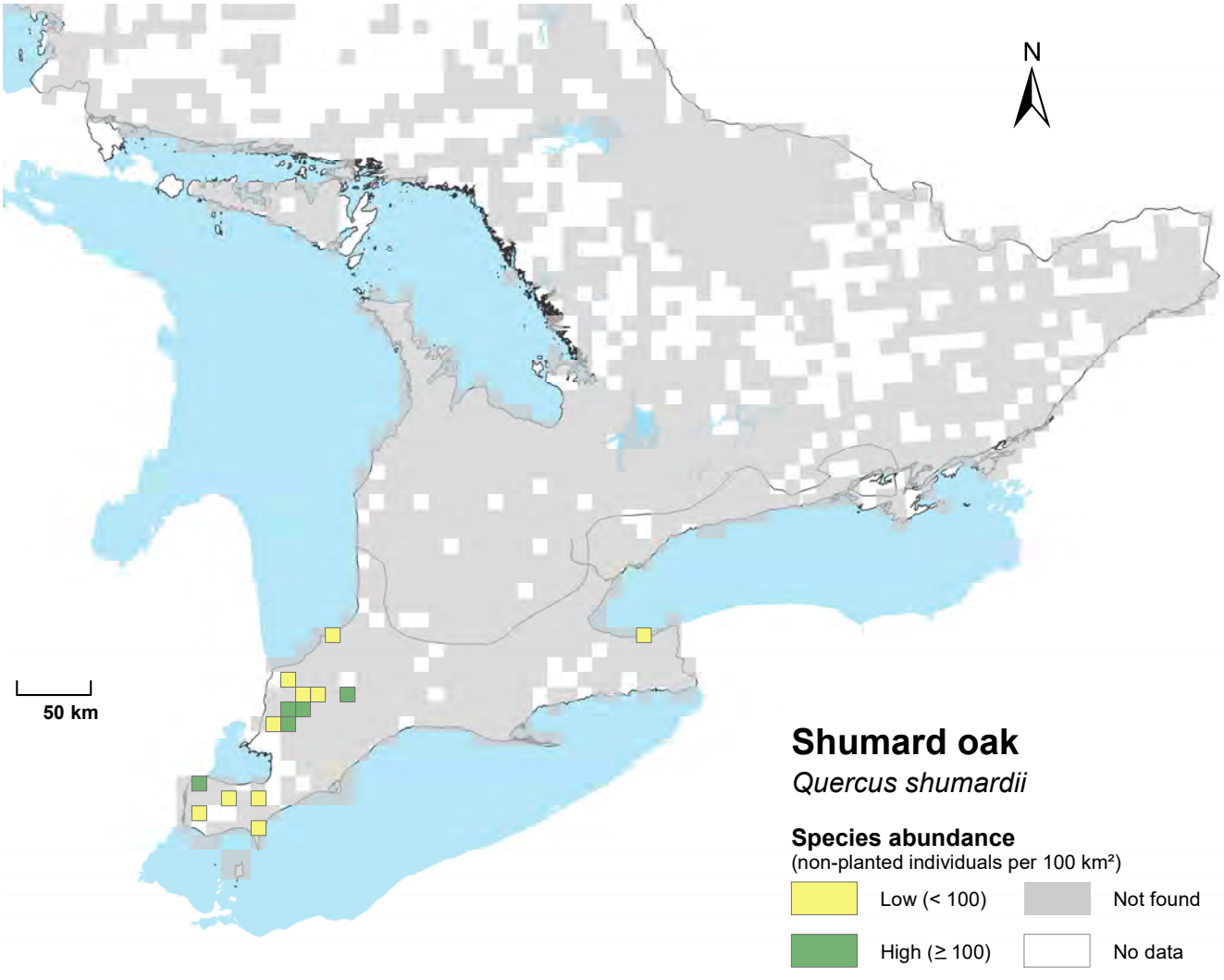
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Deciduous	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	5%
% Survey squares occupied (Provincial total)		1%



Shumard oak | Chêne de Shumard

Quercus shumardii

The reported distribution and abundance of Shumard oak in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Black oak | Chêne des teinturiers

Quercus velutina

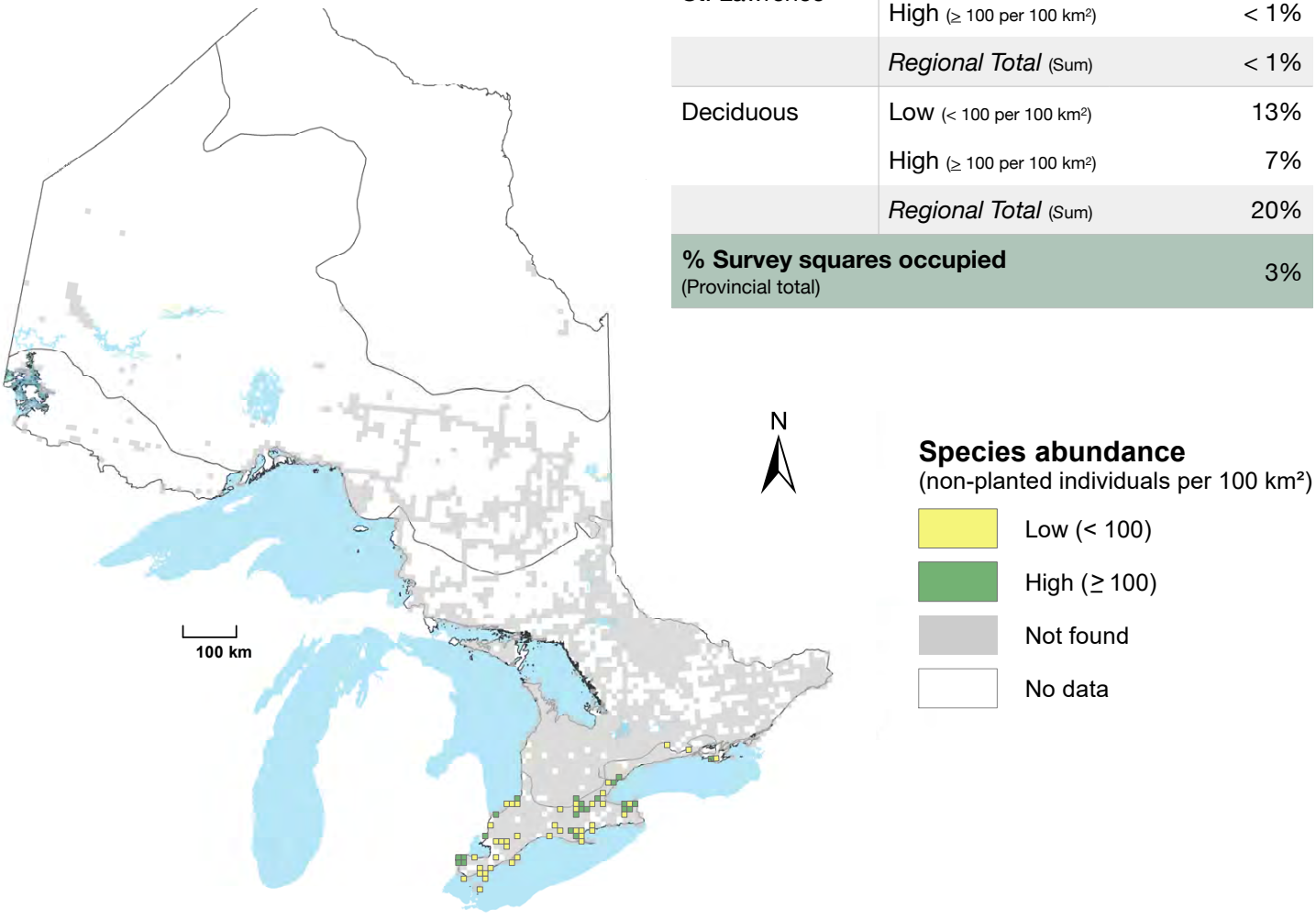
Native to Ontario

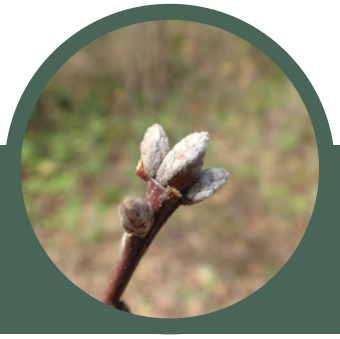
Reported distribution: Black oak had a patchy distribution and was mainly observed in the deciduous forest region where it occupied 20% of surveyed squares. Black oak was largely absent from the Great Lakes - St. Lawrence and boreal forest regions.

Reported abundance: Black oak occurred at a moderate abundance in southern Ontario but was relatively uncommon at the provincial level due to their limited range. The species tended to grow at low abundance (< 100 individuals).

Table 87 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	7%
	Regional Total (Sum)	20%
% Survey squares occupied (Provincial total)		3%

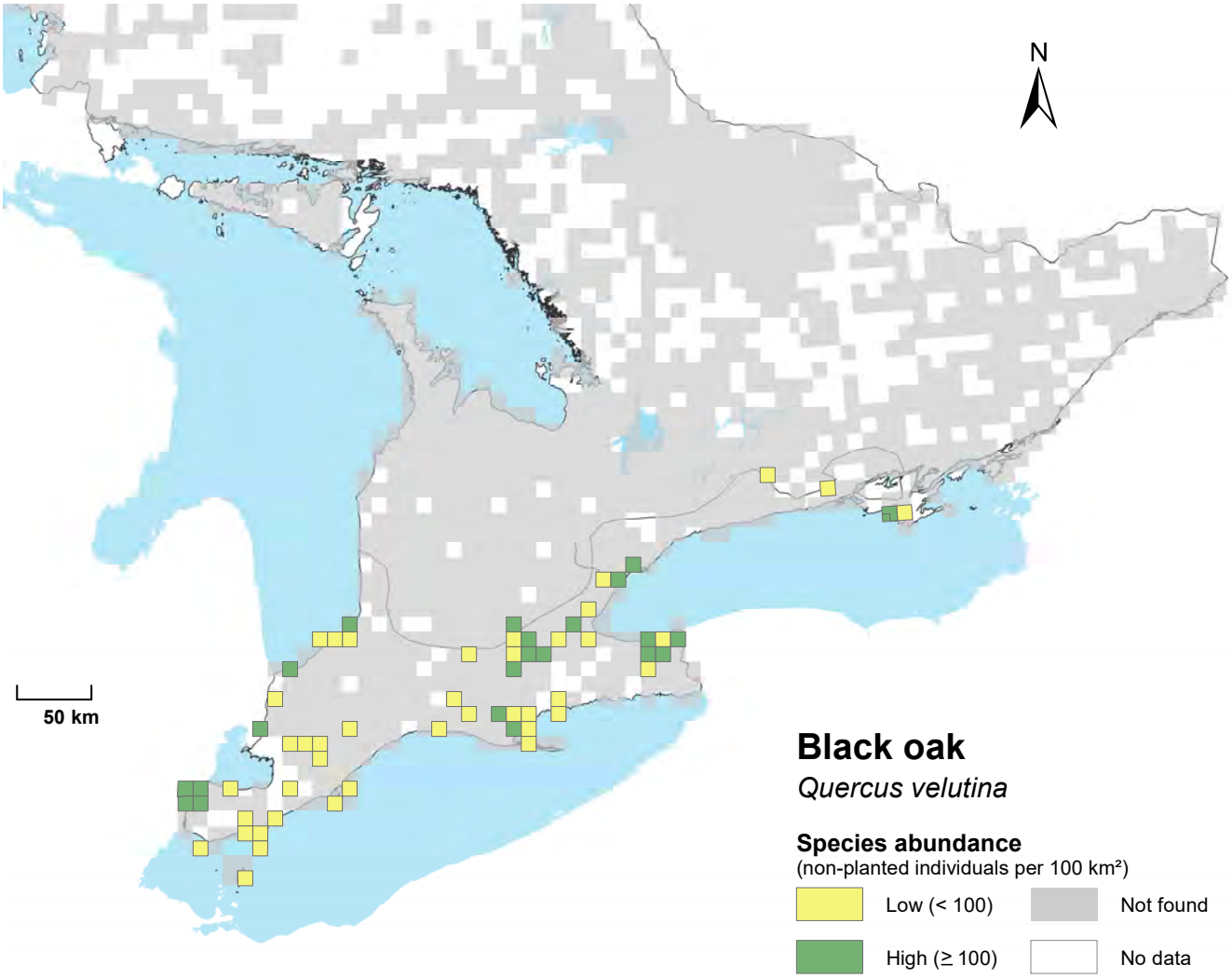




Black oak | Chêne des teinturiers

Quercus velutina

The reported distribution and abundance of black oak in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

European buckthorn | Nerprun cathartique

Rhamnus cathartica

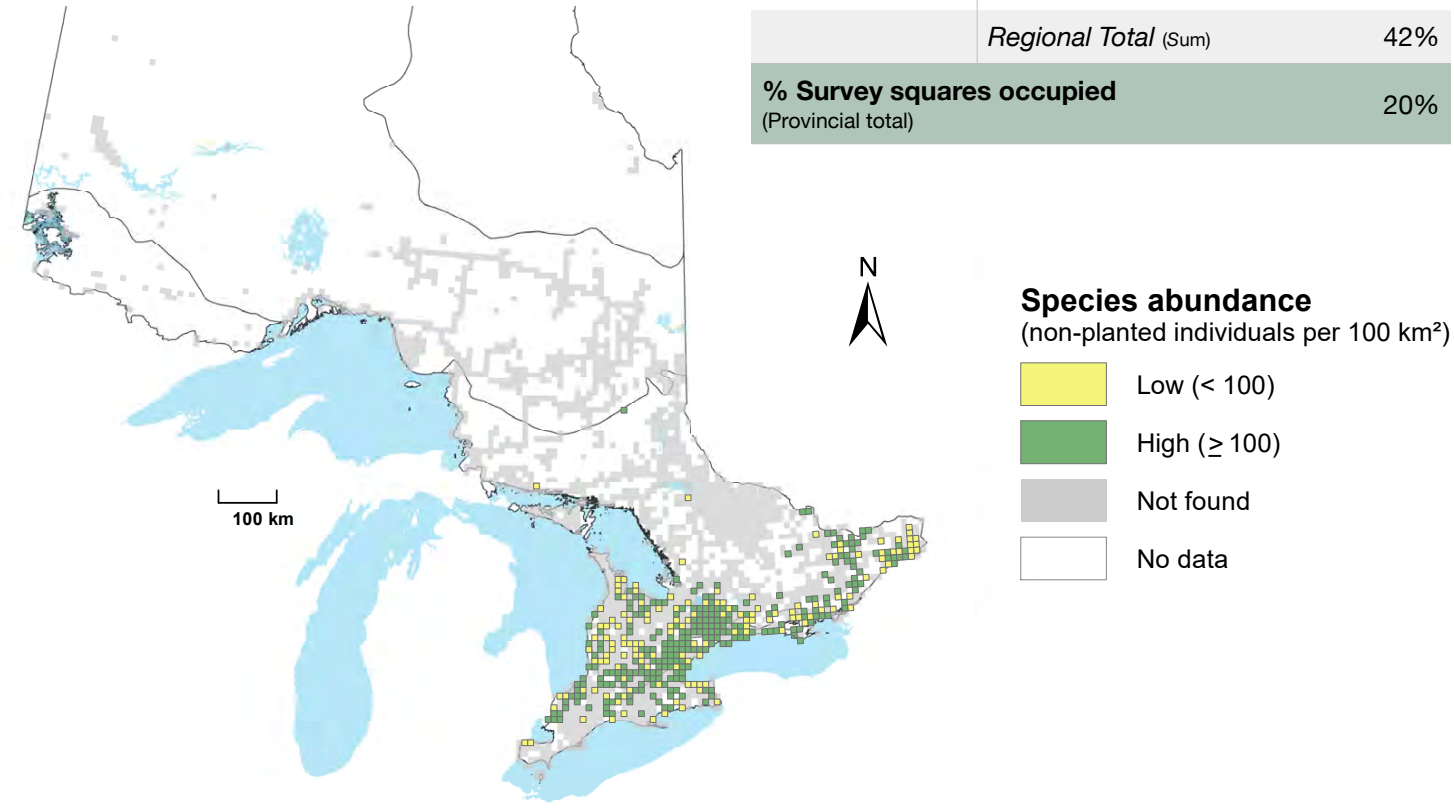
Introduced to Ontario

Reported distribution: European buckthorn is an introduced species in Ontario and was mainly observed in the southern portion of the province. The species' distribution was relatively continuous throughout its range, particularly near heavily populated areas. European buckthorn were identified in 22% of squares surveyed in the deciduous forest region and in 42% of squares in the Great Lakes - St. Lawrence forest region.

Reported abundance: European buckthorn was relatively abundant throughout southern Ontario with the majority of squares in which it was identified having ≥ 100 individuals. The distribution and high abundance of European buckthorn is indicative of the species' ability to naturalize in Ontario.

Table 88 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

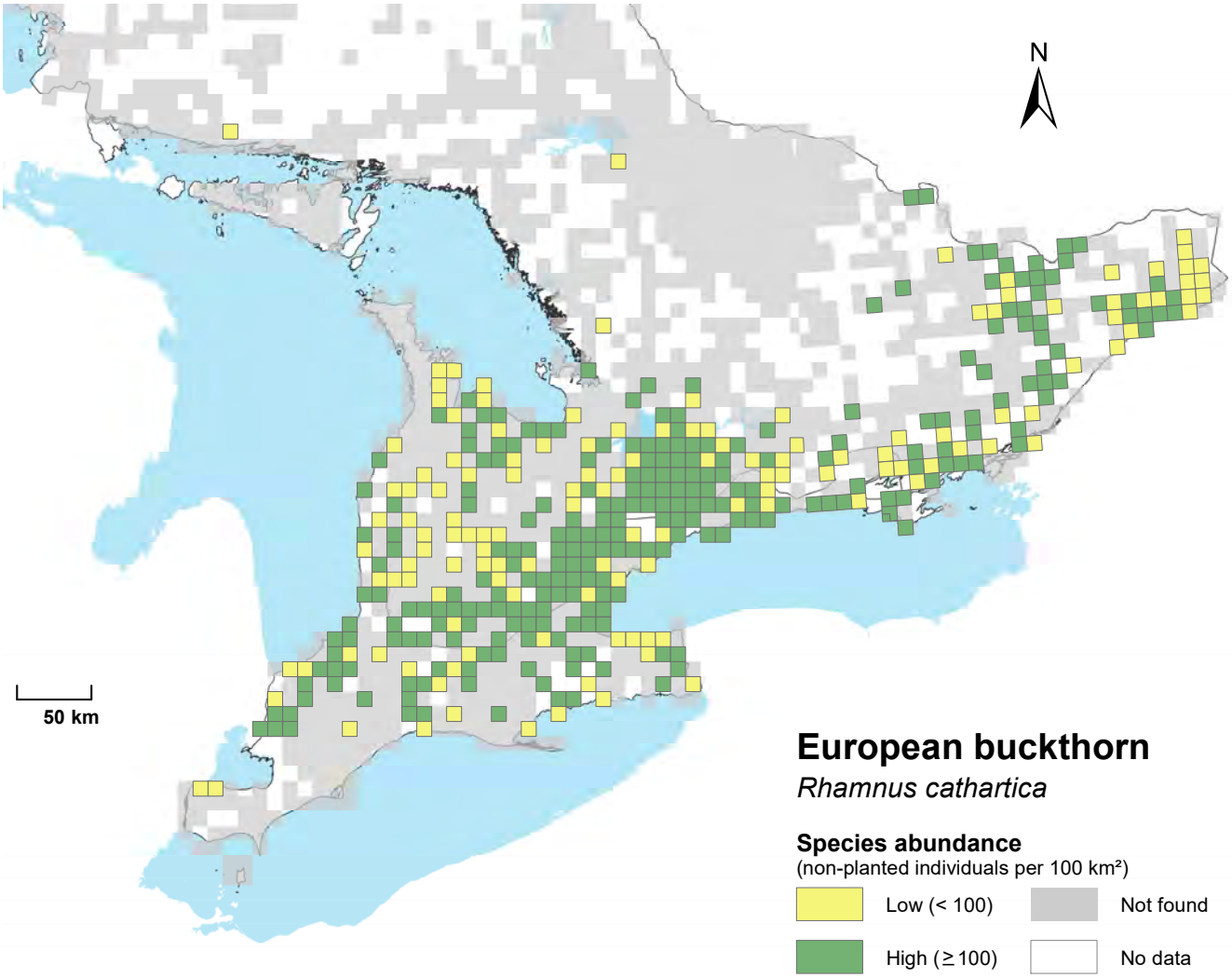
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	14%
	Regional Total (Sum)	22%
Deciduous	Low (< 100 per 100 km²)	14%
	High (≥ 100 per 100 km²)	28%
	Regional Total (Sum)	42%
% Survey squares occupied (Provincial total)		20%



European buckthorn | Nerprun cathartique

Rhamnus cathartica

The reported distribution and abundance of European buckthorn in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Smooth sumac | Sumac glabre

Rhus glabra

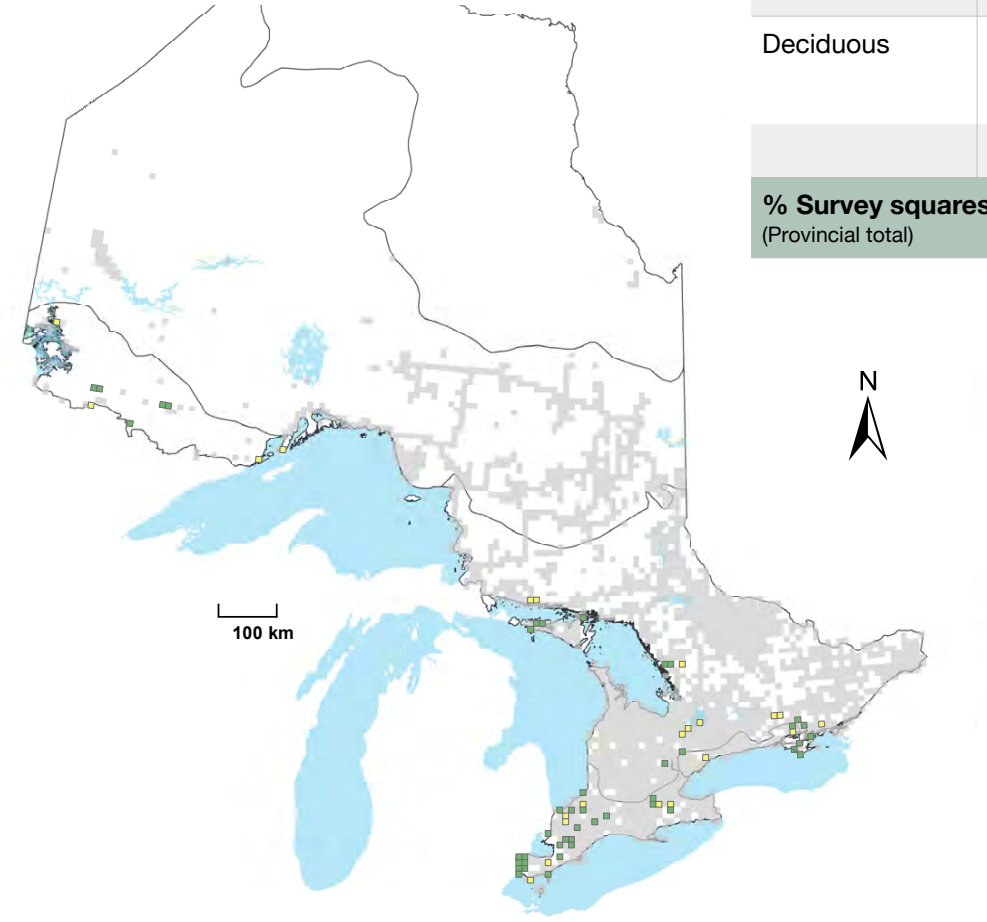
Native to Ontario

Reported distribution: The distribution of smooth sumac was mainly confined to southern Ontario; however, it was also observed in a limited number of squares surveyed in the northwestern portion of the Great Lakes - St. Lawrence forest region. The species was absent from the boreal forest and occupied 12% of squares surveyed in the deciduous forest region.

Reported abundance: Smooth sumac was most often observed to grow at high abundance (≥ 100 individuals); however, its limited and patchy distribution meant the species was somewhat uncommon at the provincial level.

Table 89 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

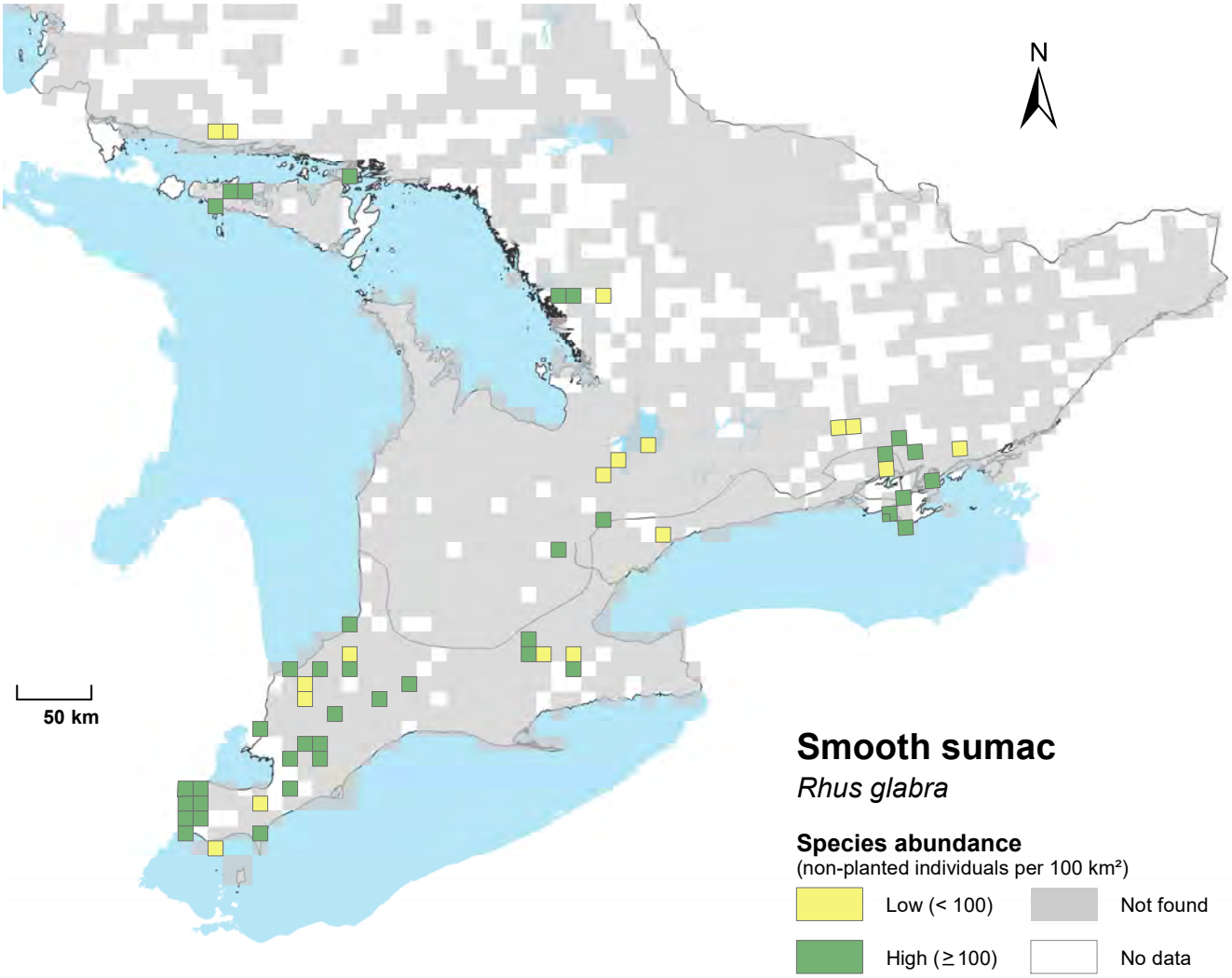
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	9%
	Regional Total (Sum)	12%
% Survey squares occupied (Provincial total)		3%



Smooth sumac | Sumac glabre

Rhus glabra

The reported distribution and abundance of smooth sumac in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Staghorn sumac | Sumac vinaigrier

Rhus typhina

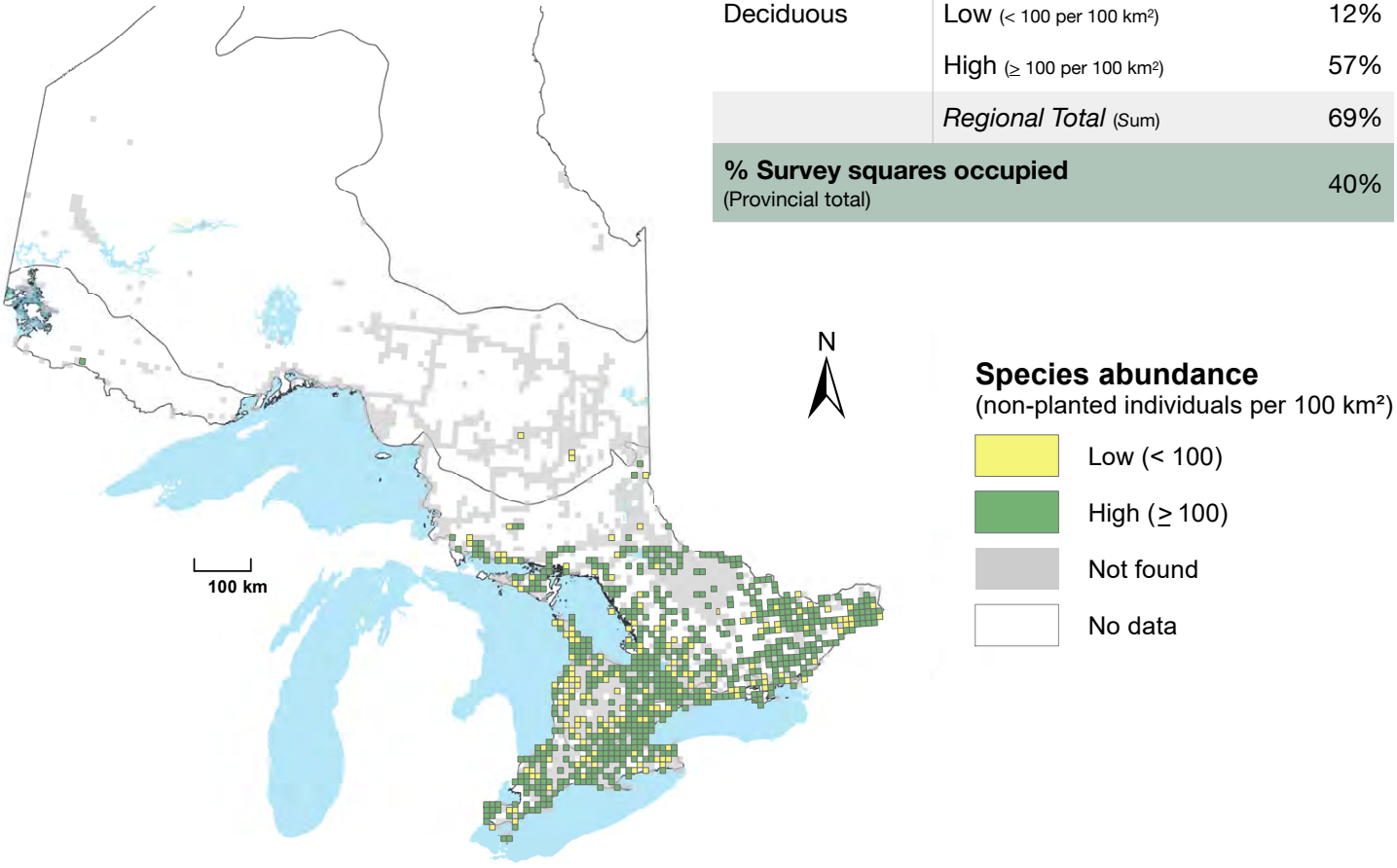
Native to Ontario

Reported distribution: The distribution of staghorn sumac mainly fell below about 47°N latitude; however, it was also observed in a limited number of squares surveyed in the boreal forest region. Staghorn sumac was commonly encountered in the deciduous and Great Lakes - St. Lawrence forest regions where it occupied 69% and 50% of squares surveyed.

Reported abundance: Staghorn sumac was generally observed to grow at high abundance (≥ 100 individuals) within its range. The species was commonly in the southern third of the province and was relatively uncommon north of Georgian Bay.

Table 90 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

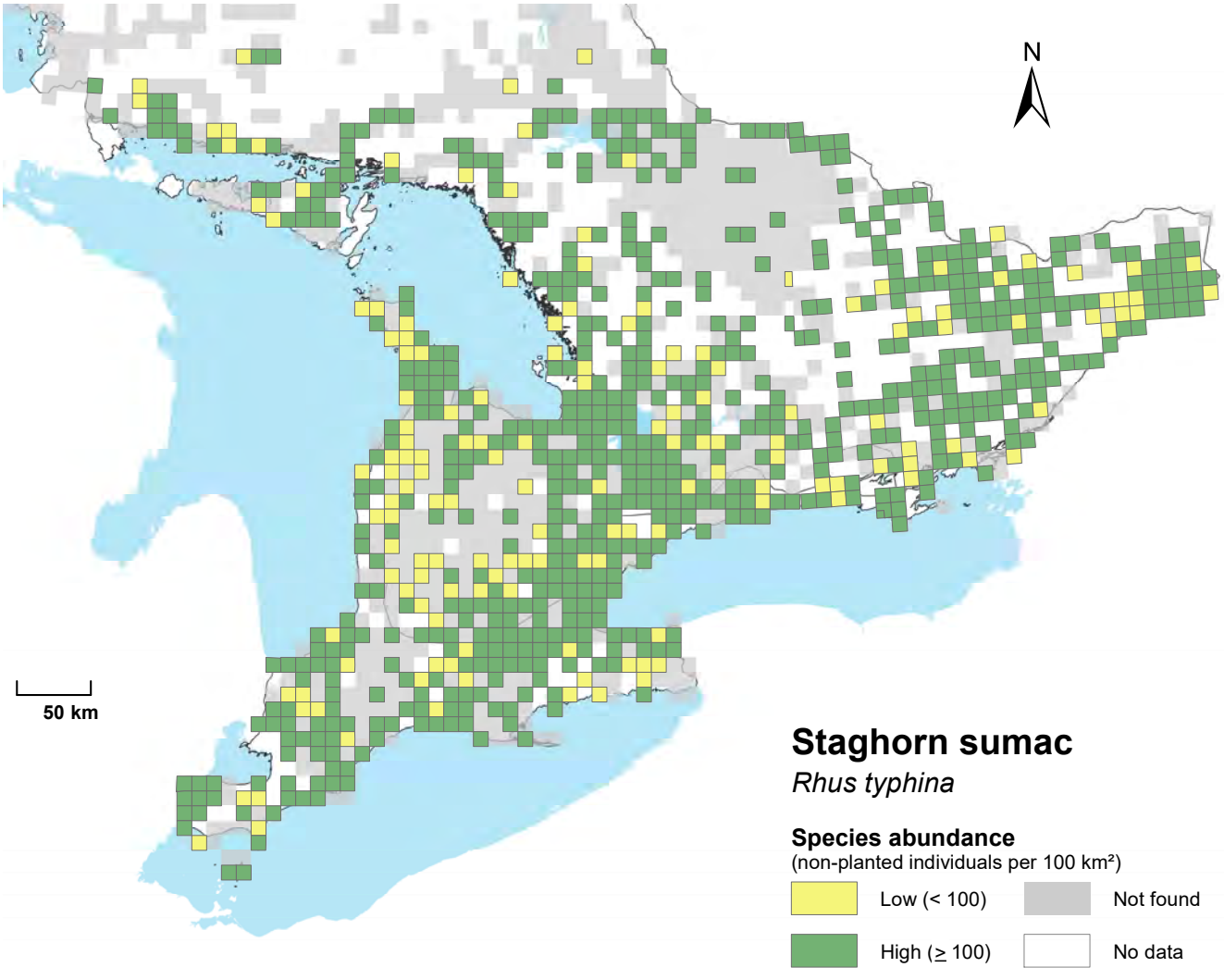
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	40%
	Regional Total (Sum)	50%
Deciduous	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	57%
	Regional Total (Sum)	69%
% Survey squares occupied (Provincial total)		40%



Staghorn sumac | Sumac vinaigrier

Rhus typhina

The reported distribution and abundance of staghorn sumac in squares surveyed in southern Ontario (below 47°N)



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Coordinate System: NAD 1927 UTM Zone 17N

Black-locust | Robinier faux-acacia

Robinia pseudoacacia

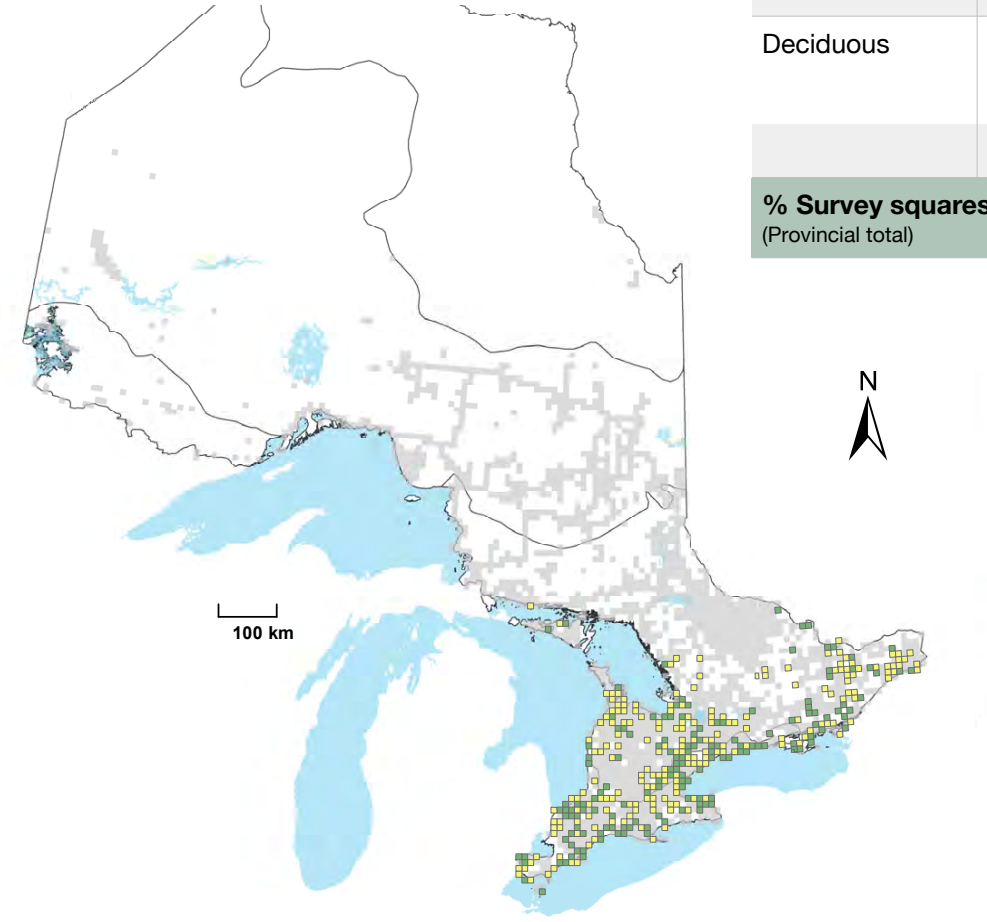
Introduced to Ontario

Reported distribution: The distribution of black-locust was found to lie below about 46°N latitude. Within its range, the species' distribution was relatively discontinuous. Black-locust was identified in 48% of squares surveyed in the deciduous forest region and in 16% of squares in the Great Lakes - St. Lawrence forest region. The species was not found above 47°N latitude.

Reported abundance: Black-locust was a moderately abundant species in Ontario. It was equally likely to be found growing at high (≥ 100 individuals) or low (< 100 individuals) abundance.

Table 91 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

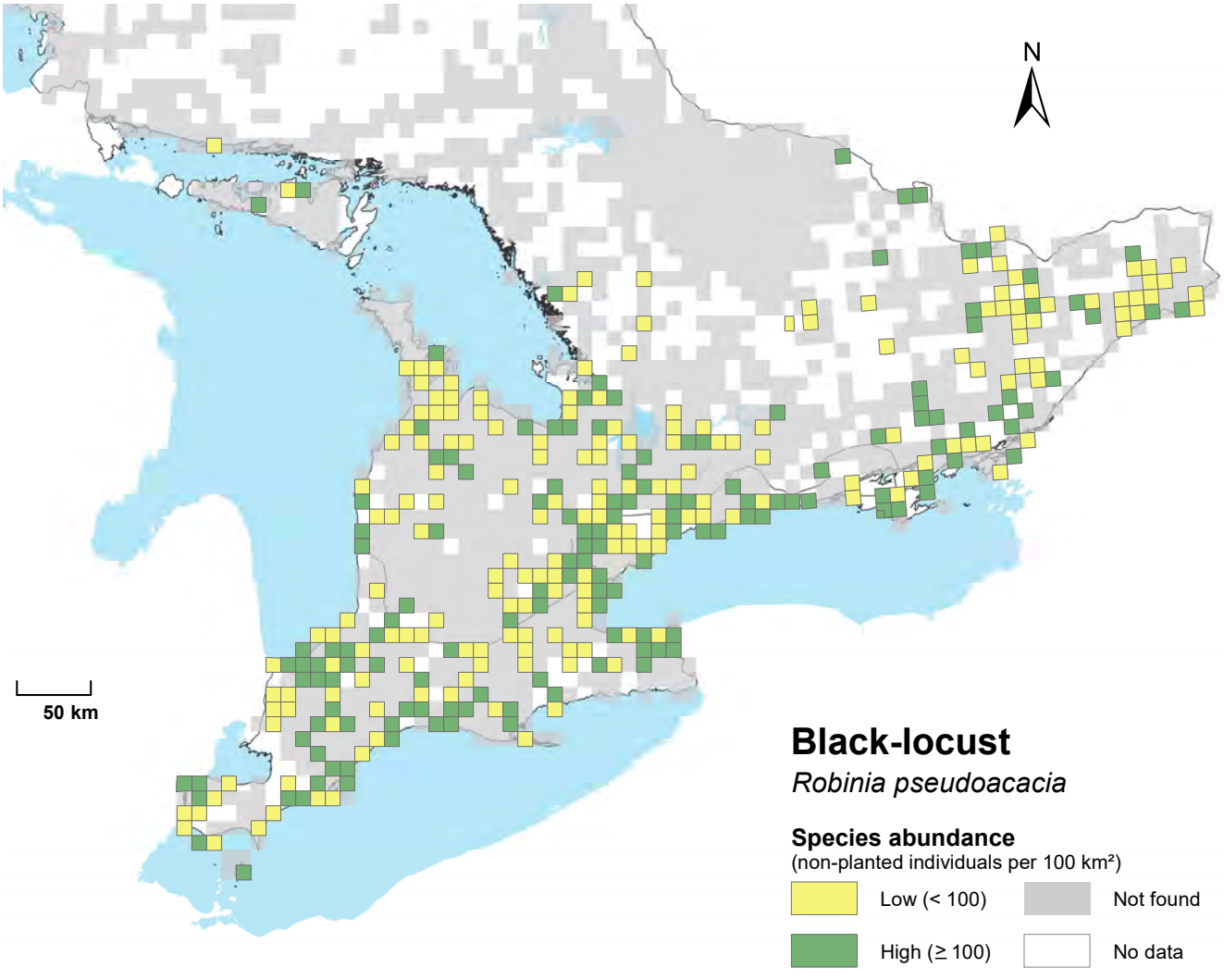
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	16%
Deciduous	Low (< 100 per 100 km²)	23%
	High (≥ 100 per 100 km²)	25%
	Regional Total (Sum)	48%
% Survey squares occupied (Provincial total)		17%



Black-locust | Robinier faux-acacia

Robinia pseudoacacia

The reported distribution and abundance of black-locust in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Peach-leaved willow | Saule à feuilles de pêcher

Salix amygdaloides

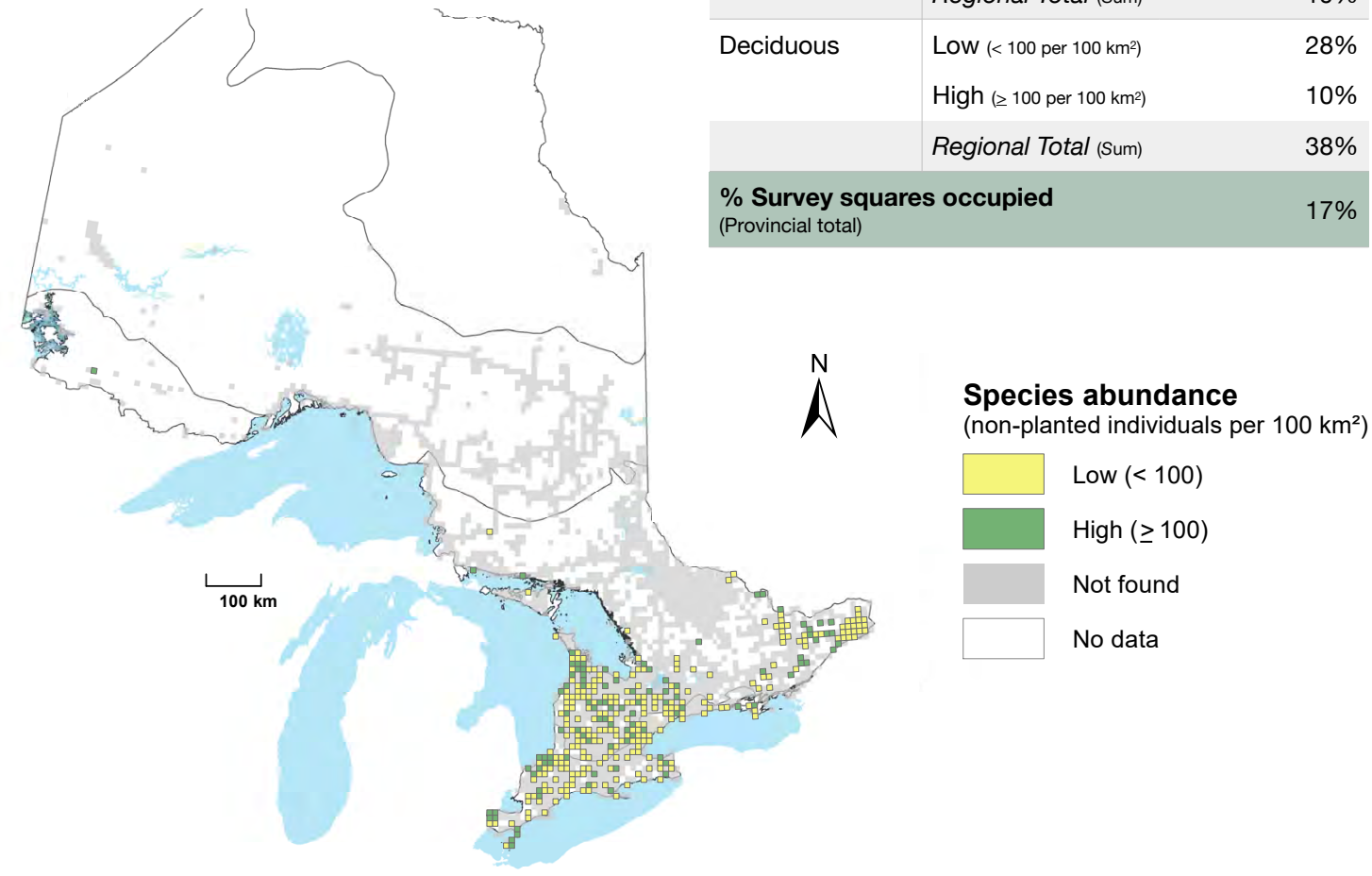
Native to Ontario

Reported distribution: Peach-leaved willow was distributed entirely within the deciduous and Great Lakes - St. Lawrence Forest Regions of Ontario, most often within wetlands, lake and stream edges and adjacent to roadside ditches.

Reported abundance: Reports of abundance are quite variable throughout the range. Peach-leaved willow was observed more frequently at low (< 100 individuals) abundance. As a species requiring wetland habitats, this inconsistent abundance may be due to a reduction in suitable habitat for regeneration in areas under development pressure.

Table 92 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

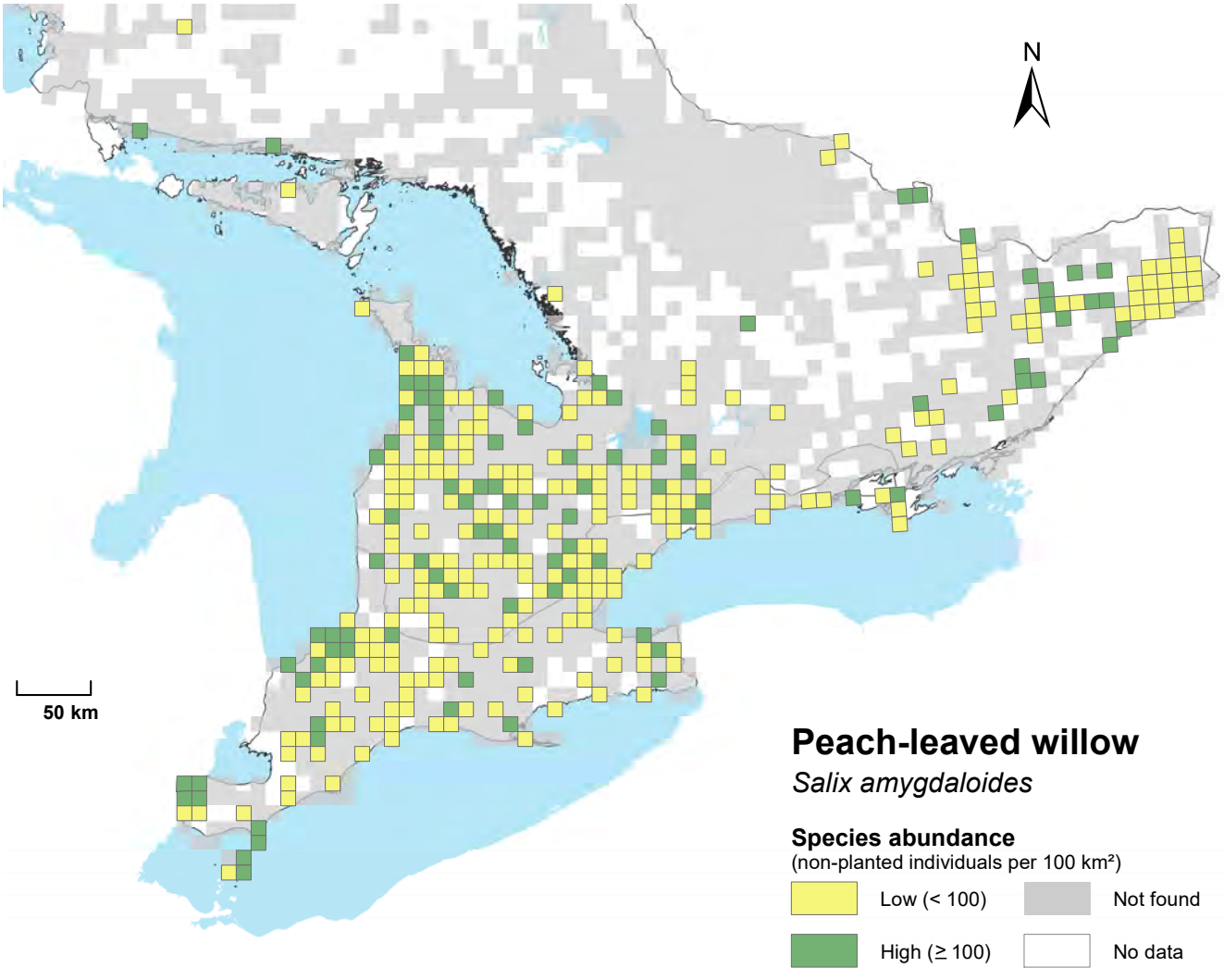
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	13%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	19%
Deciduous	Low (< 100 per 100 km²)	28%
	High (≥ 100 per 100 km²)	10%
	Regional Total (Sum)	38%
% Survey squares occupied (Provincial total)		17%



Peach-leaved willow | Saule à Feuilles de pêcher

Salix amygdaloides

The reported distribution and abundance of peach-leaved willow in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
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Coordinate System: NAD 1927 UTM Zone 17N

Black willow | Saule noir

Salix nigra

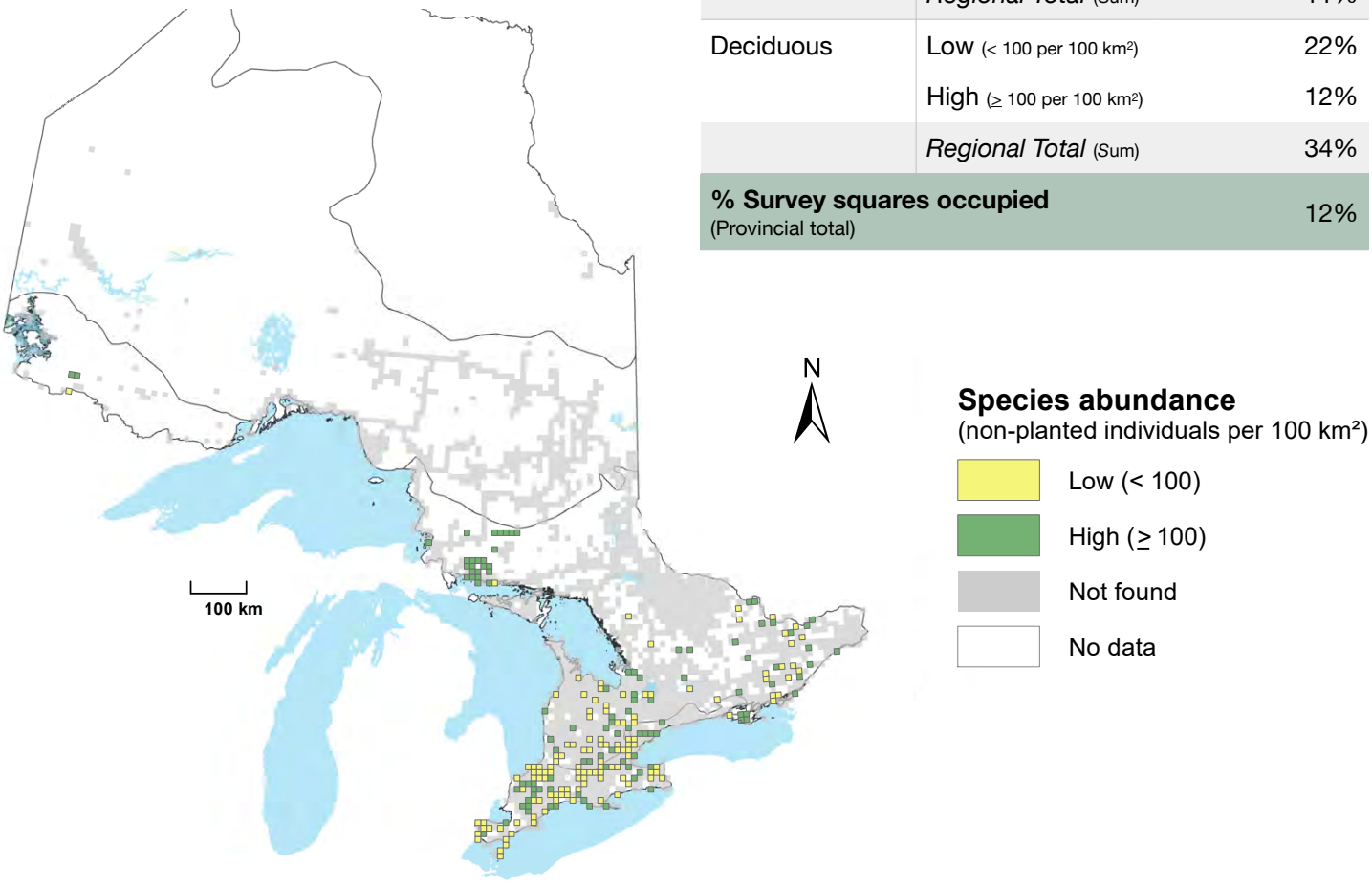
Native to Ontario

Reported distribution: The distribution of black willow lay within the deciduous forest region and the southern portion of the Great Lakes - St. Lawrence region. Volunteer reports from the most northern survey squares represent range extensions that are somewhat suspect without further inspection.

Reported abundance: The species' abundance was was sporadic throughout its range, perhaps a reflection of how this species naturally regenerates, but also likely due to challenges with identifying and reporting this species accurately.

Table 93 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

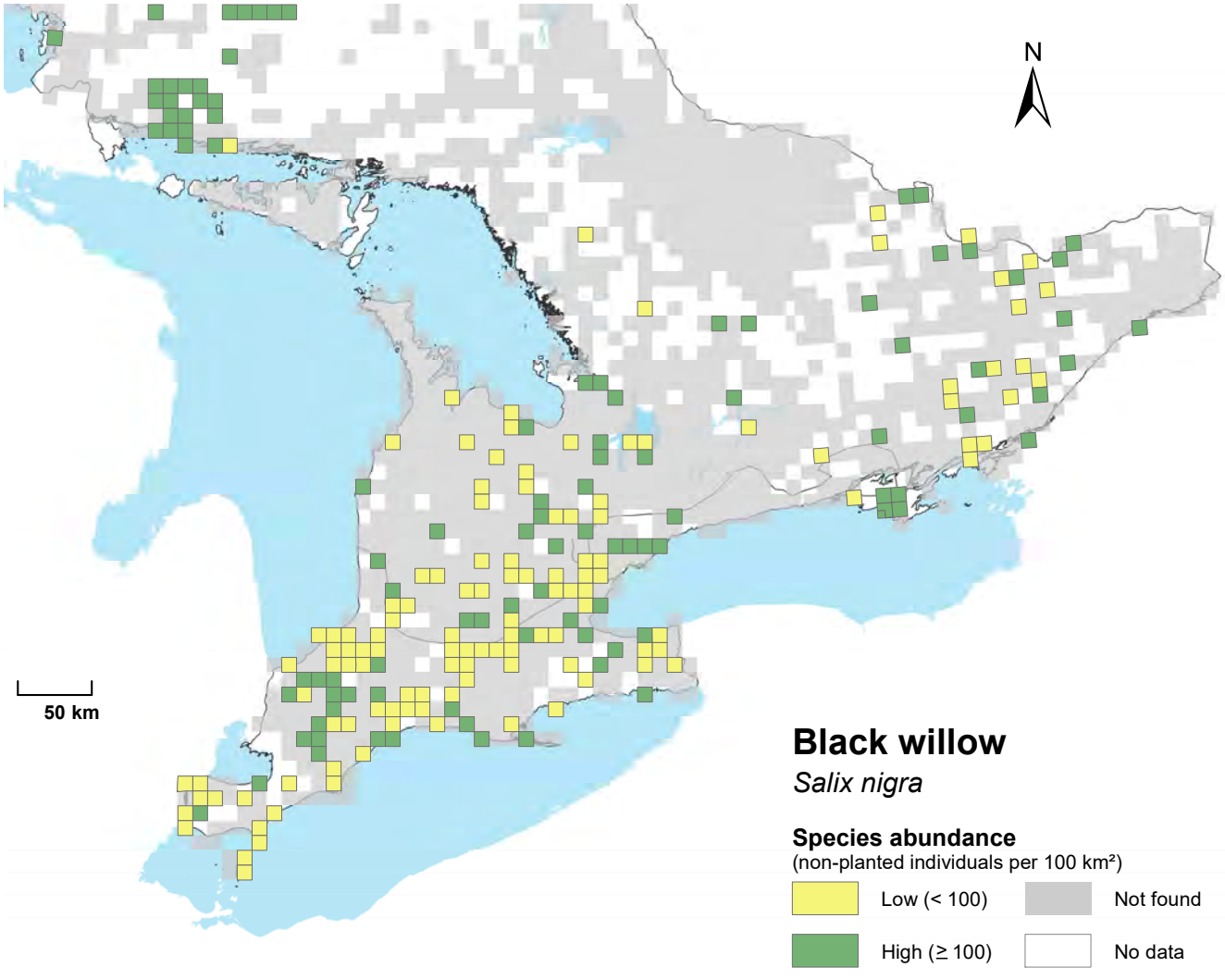
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	5%
	High (≥ 100 per 100 km²)	6%
	Regional Total (Sum)	11%
Deciduous	Low (< 100 per 100 km²)	22%
	High (≥ 100 per 100 km²)	12%
	Regional Total (Sum)	34%
% Survey squares occupied (Provincial total)		12%



Black willow | Saule noir

Salix nigra

The reported distribution and abundance of black willow in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Eurasian hybrid willow complex | Saule hybride

Salix spp.

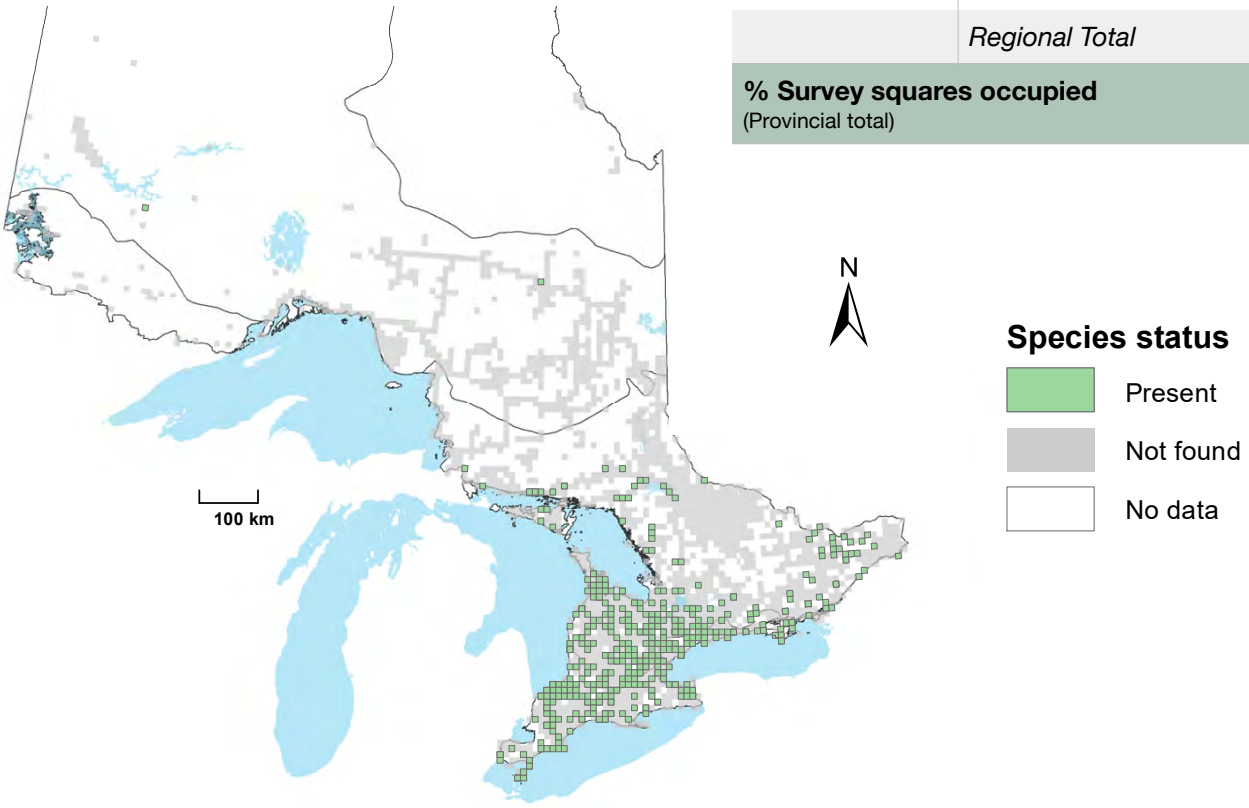
Introduced to Ontario

Reported distribution: Accurately distinguishing between each non-native, tree-size willow species and their hybrid offspring proved to be a difficult endeavour for a volunteer-based program. The maps presented represent the reported distribution of this introduced species complex and how broadly they have naturalized in Ontario. The species complex was widespread throughout the deciduous forest region, occupying 45% of surveyed squares, and in parts of the Great Lakes - St. Lawrence forest region.

Reported abundance: Relative abundance was not particularly high in most observed squares; however, greater localized abundance can be expected along waterways and other areas of natural dispersal.

Table 94 The reported distribution of non-planted individuals in each forest region, and across the province. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

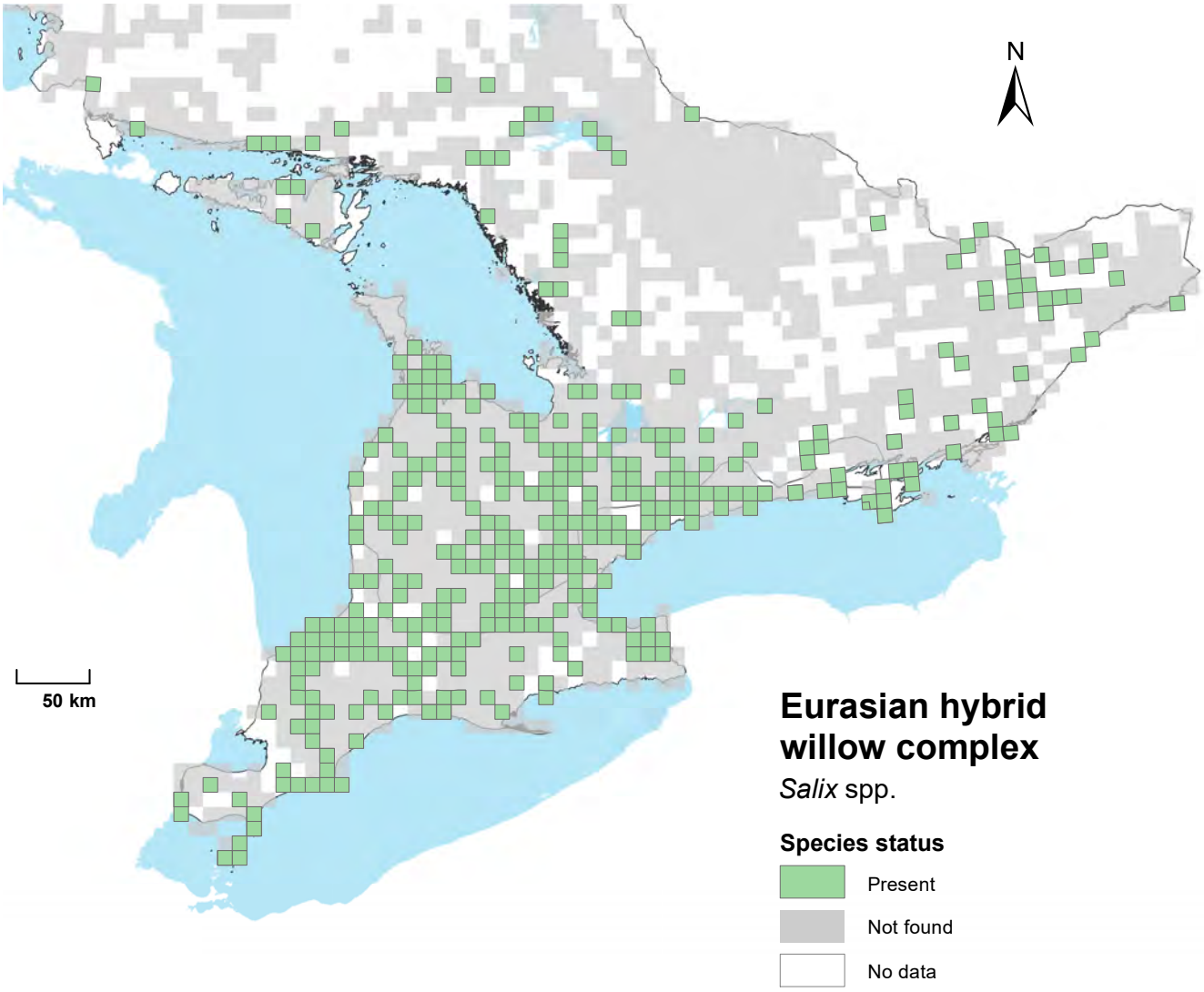
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	18%
Deciduous	Low (< 100 per 100 km²)	NA
	High (≥ 100 per 100 km²)	NA
	Regional Total	45%
% Survey squares occupied (Provincial total)		18%



Eurasian hybrid willow complex | Saule hybride

Salix spp.

The reported distribution of the Eurasian hybrid willow complex in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Sassafras | Sassafras officinal

Sassafras albidum

Native to Ontario

Reported distribution: Sassafras had a southern distribution in Ontario where the species occurred in several clusters of survey squares in the southwestern region of the province. Sassafras was observed in 20% of squares surveyed in the deciduous forest region, and in just < 1% of squares in the Great Lakes

Reported abundance: Sassafras was observed to grow at high abundance (≥ 100 individuals) in about half of the survey squares in which they were identified; however, the relatively limited and patchy distribution of the species indicates that it has a low abundance at the provincial-level.

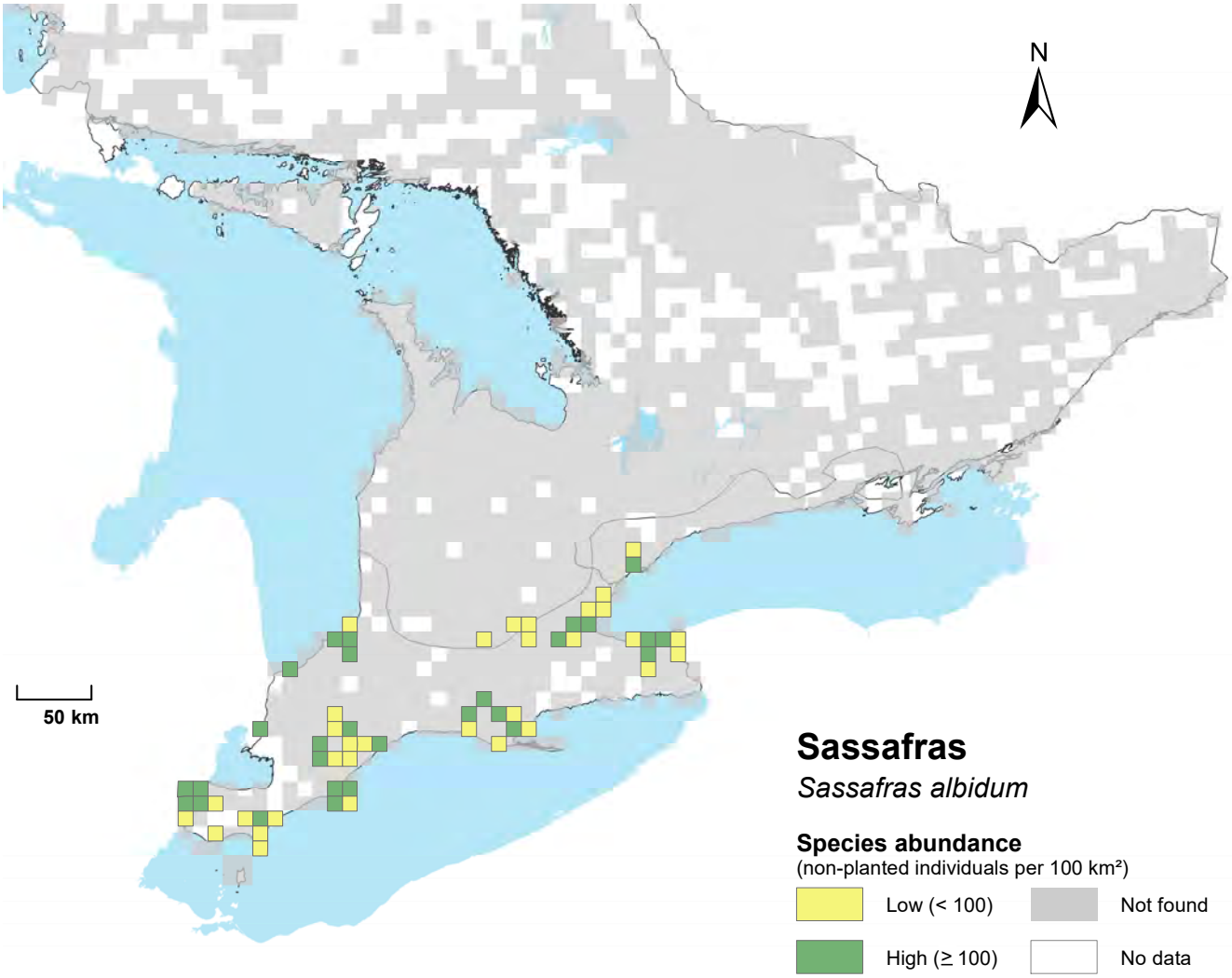
Table 95 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	10%
	High (≥ 100 per 100 km²)	10%
	Regional Total (Sum)	20%
% Survey squares occupied (Provincial total)		3%

Sassafras | Sassafras officinal

Sassafras albidum

The reported distribution and abundance of sassafras in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

American mountain-ash | Sorbier d'Amérique

Sorbus americana

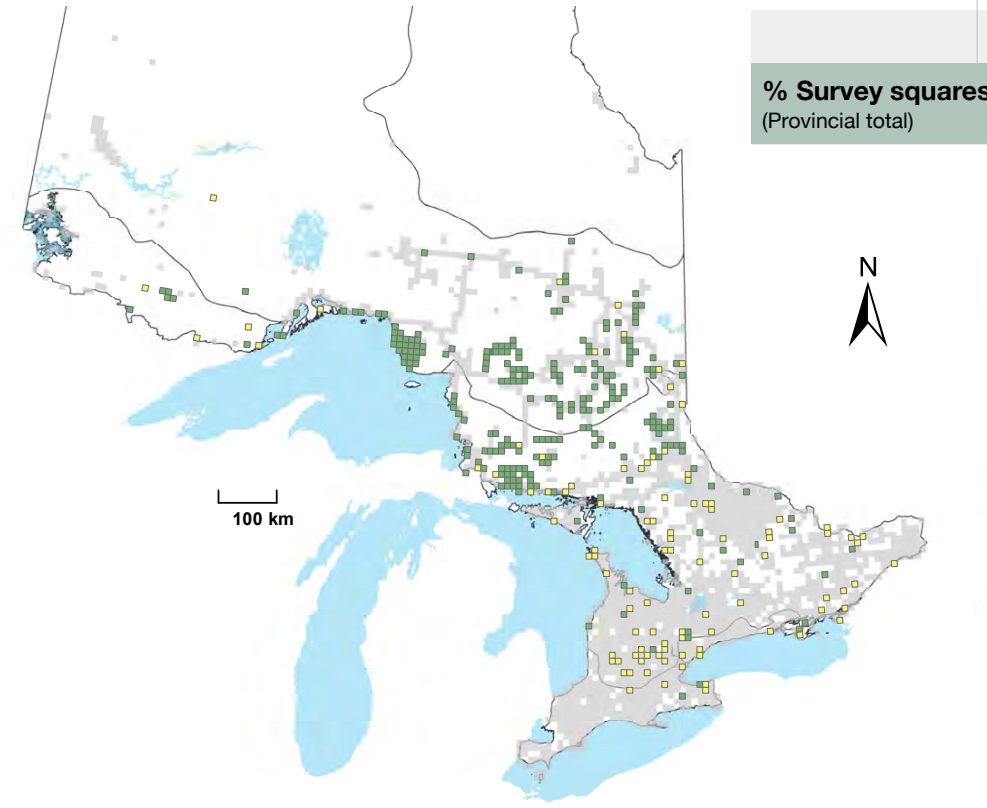
Native to Ontario

Reported distribution: The distribution of American mountain-ash extended across all forest regions but was relatively discontinuous throughout southern Ontario. The potential for American mountain-ash to be confused with either European mountain-ash or showy mountain-ash is significant enough to warrant reservations about the accuracy of the distribution map. Generally speaking, American mountain-ash is very uncommon or absent in the south of the province; reports from these areas possibly represent European mountain-ash.

Reported abundance: American mountain-ash transitioned from low to high abundance around 46°N latitude. The species was commonly encountered in northern Ontario.

Table 96 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

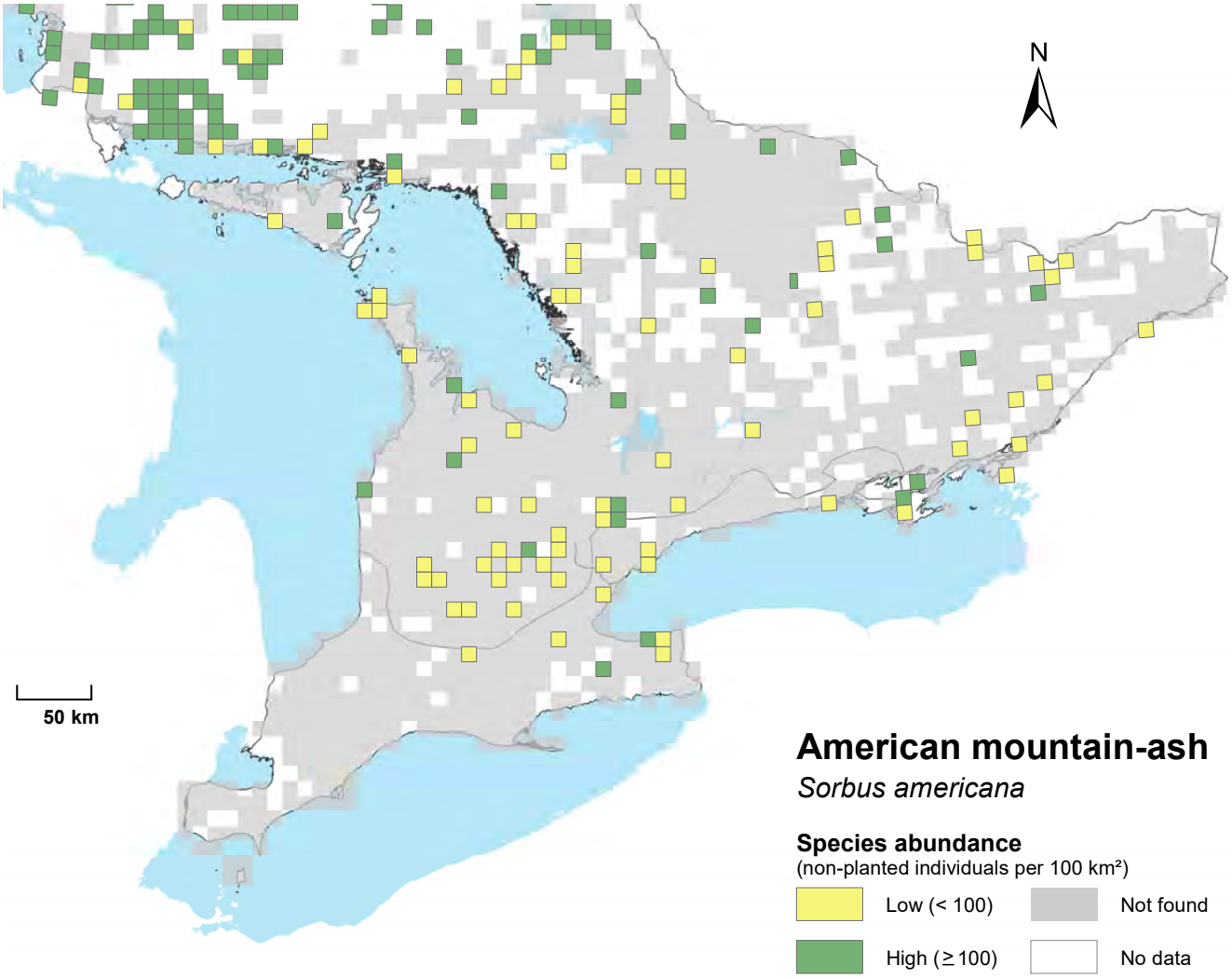
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	28%
	Regional Total (Sum)	30%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	9%
	Regional Total (Sum)	16%
Deciduous	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	4%
% Survey squares occupied (Provincial total)		18%



American mountain-ash | Sorbier d'Amérique

Sorbus americana

The reported distribution and abundance of American mountain-ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

European mountain-ash | Sorbier des oiseleurs

Sorbus aucuparia

Introduced to Ontario

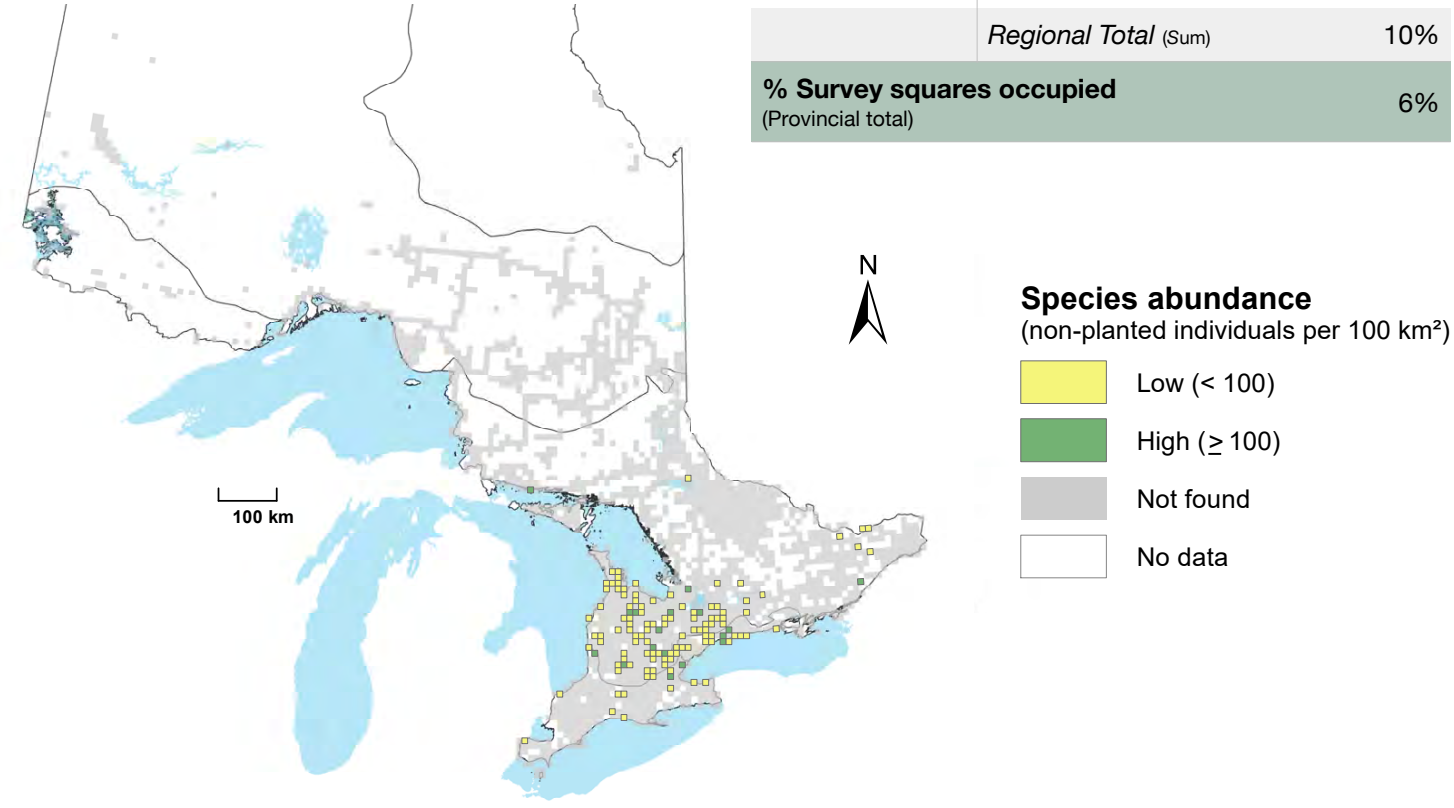
Reported distribution: European mountain-ash is an introduced species in Ontario. The majority of survey squares in which the species was observed occurred near urban areas below 45°N latitude. The potential for European mountain-ash to be confused by Tree Atlas volunteers with either American mountain-ash or showy mountain-ash is significant enough to warrant reservations about the accuracy of the accompanied distribution map.

Reported abundance: European mountain-ash tended to grow at low abundance within its distribution.

The ability of European mountain-ash to naturalize in Ontario is reflected by its distribution in and around urban centres.

Table 97 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

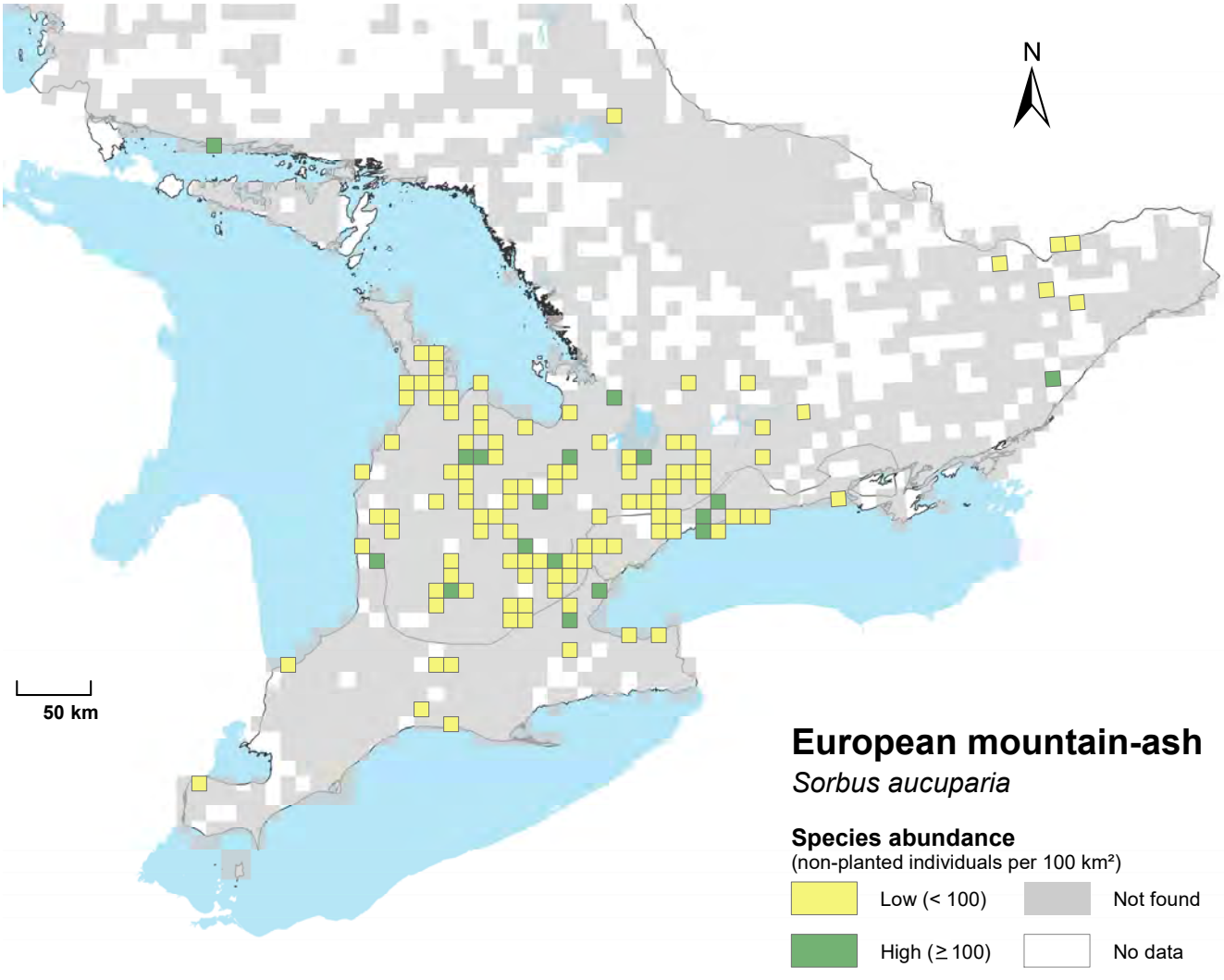
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	8%
Deciduous	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	10%
% Survey squares occupied (Provincial total)		6%



European mountain-ash | Sorbier des oiseleurs

Sorbus aucuparia

The reported distribution and abundance of European mountain-ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Showy mountain-ash | Sorbier plaisant

Sorbus decora

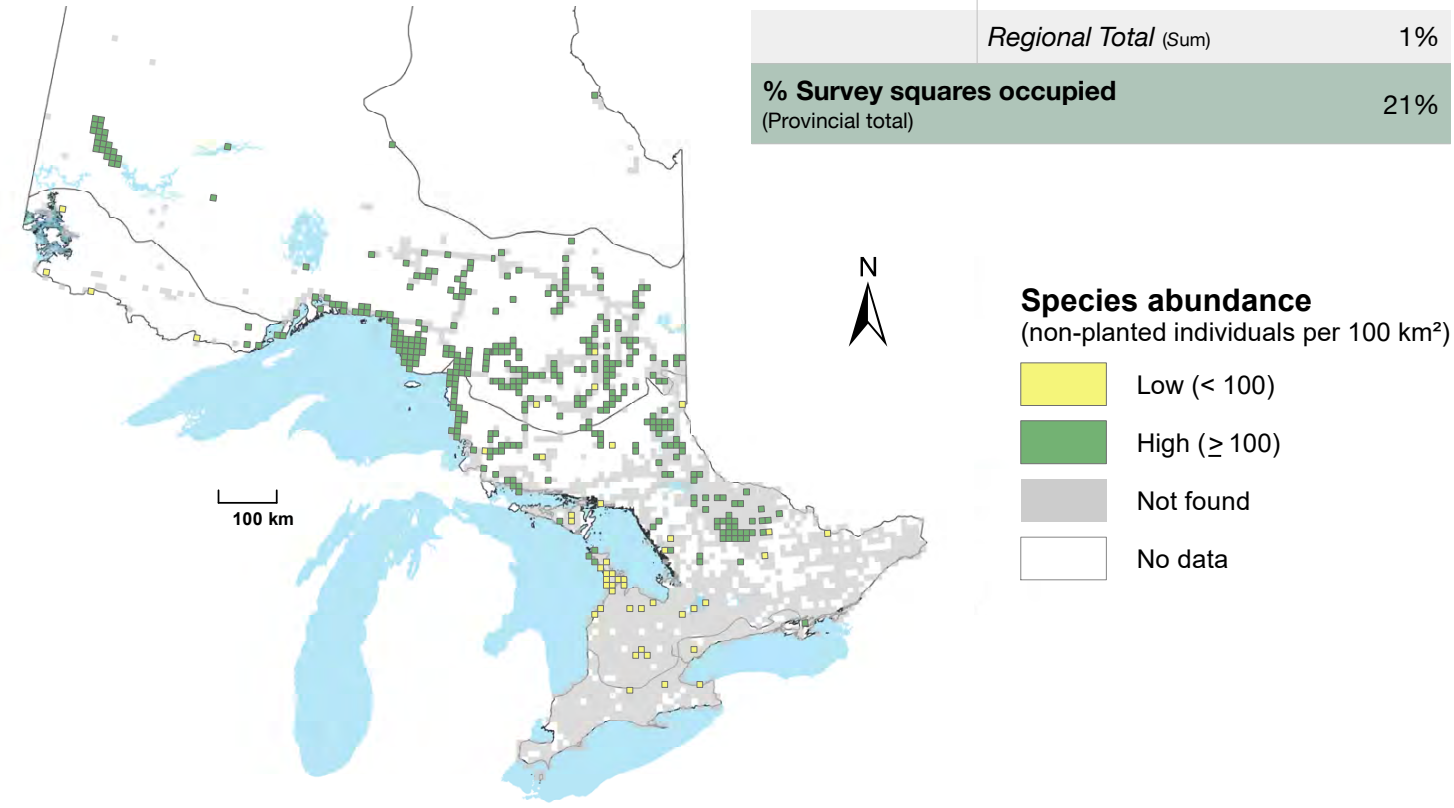
Native to Ontario

Reported distribution: The distribution of showy mountain-ash covered all three surveyed forest regions with the main portion of the species' range above 46°N latitude. The potential for showy mountain-ash to be confused by Tree Atlas volunteers with either European mountain-ash or American mountain-ash is significant enough to warrant reservations about accuracy of the accompanied maps. Generally speaking, showy mountain-ash is uncommon or absent in the more southern parts of the province, and reports from these areas are likely to be the similar European mountain-ash.

Reported abundance: Showy mountain-ash was relatively abundant in the northern portion of its range where it tended to grow at high abundance.

Table 98 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

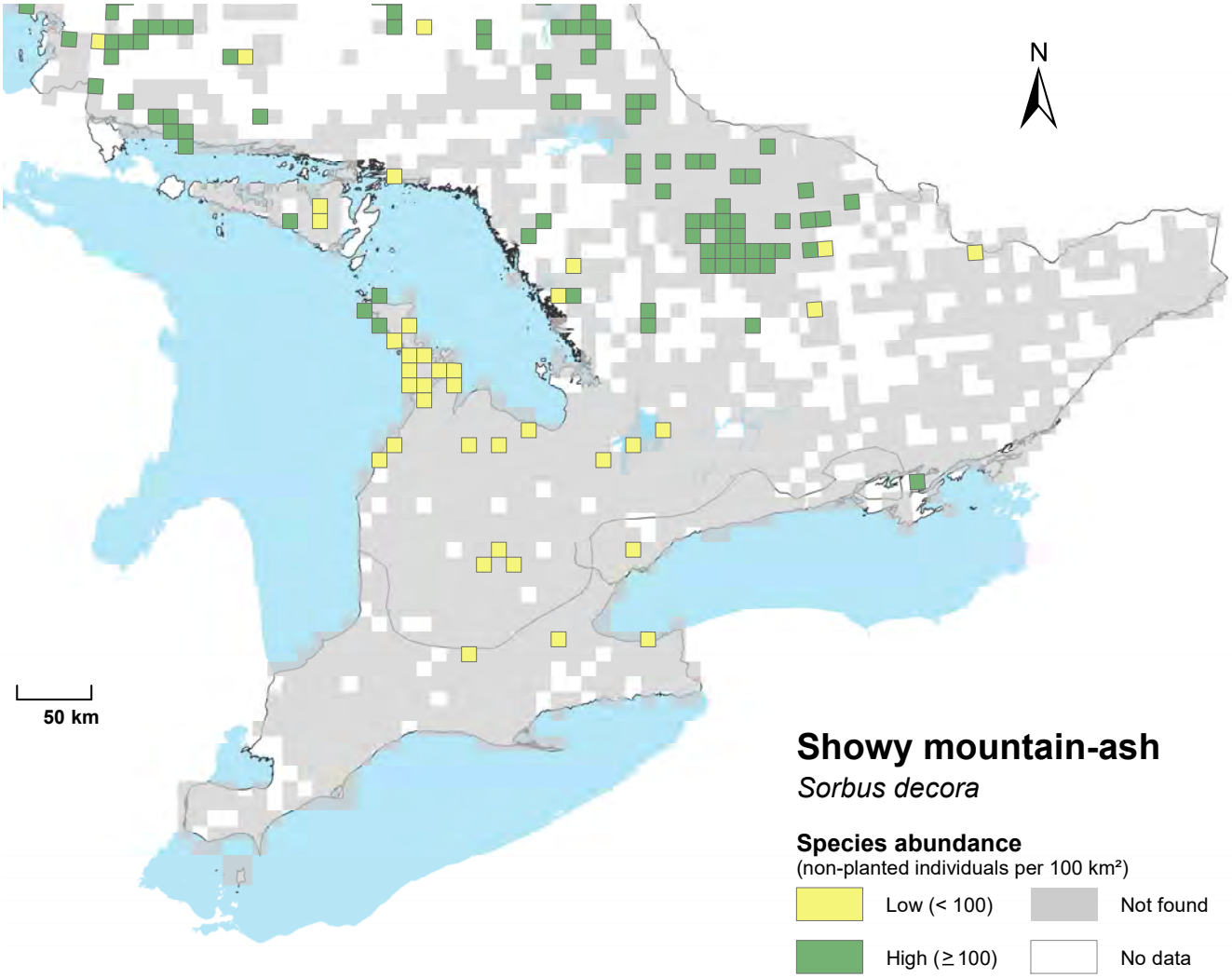
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	50%
	Regional Total (Sum)	51%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	3%
	High (≥ 100 per 100 km²)	10%
	Regional Total (Sum)	13%
Deciduous	Low (< 100 per 100 km²)	1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	1%
% Survey squares occupied (Provincial total)		21%



Showy mountain-ash | Sorbier plaisant

Sorbus decora

The reported distribution and abundance of showy mountain-ash in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Basswood | Tilleul d'Amérique

Tilia americana

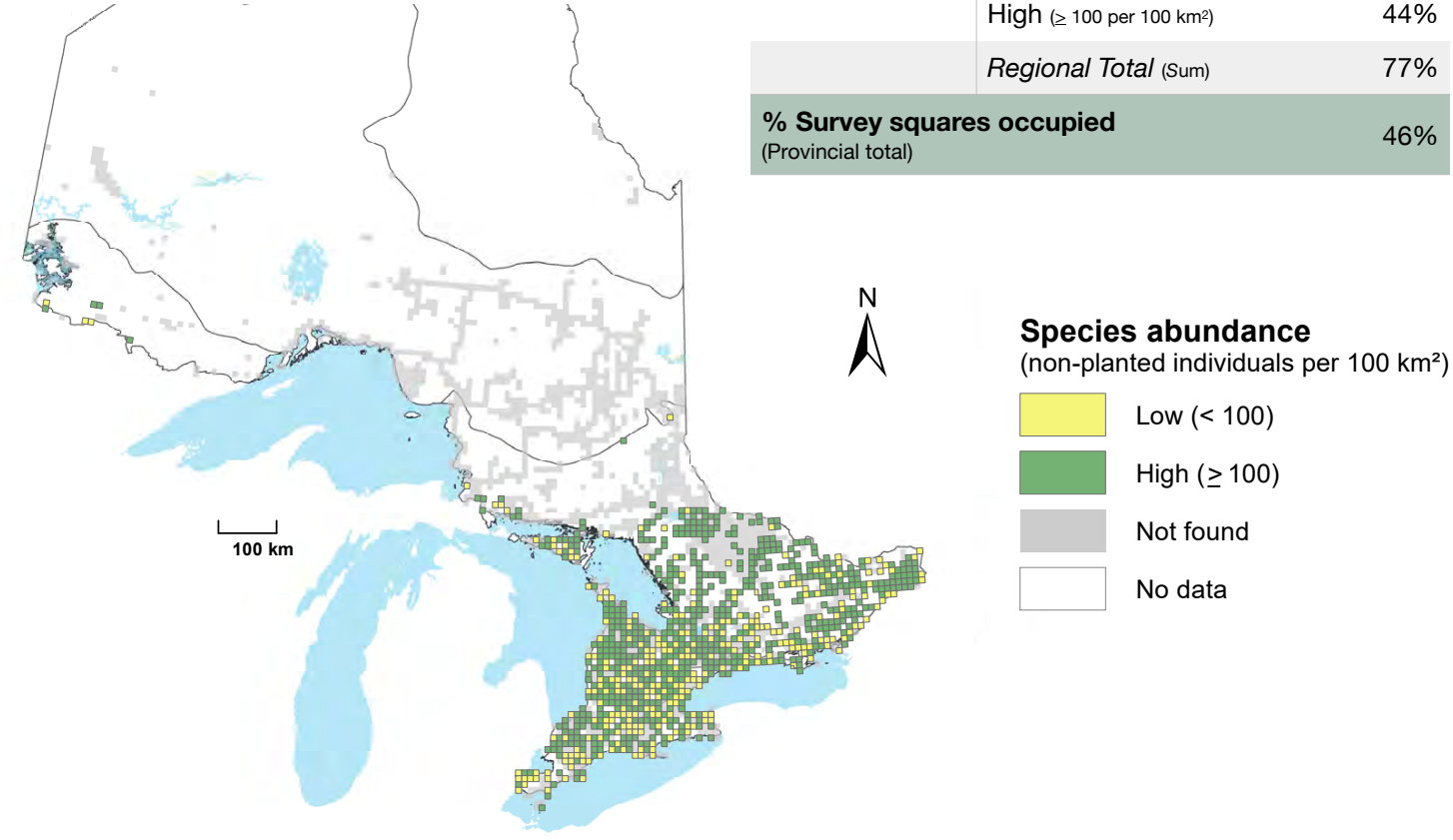
Native to Ontario

Reported distribution: The distribution of basswood was mainly limited to southern Ontario where the species range ended abruptly around 46.5°N latitude. Basswood occurred in the vast majority of survey squares within its range, and it occupied 77% and 58% of those surveyed in the deciduous and Great Lakes - St. Lawrence regions. Basswood also occurred in a limited number of survey squares in the northwest portion of the Great Lakes St. Lawrence and in one square in the boreal forest region.

Reported abundance: Basswood was highly abundant within its range. The species grew at high abundance (≥ 100 individuals) in the majority of squares in which it was identified.

Table 99 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

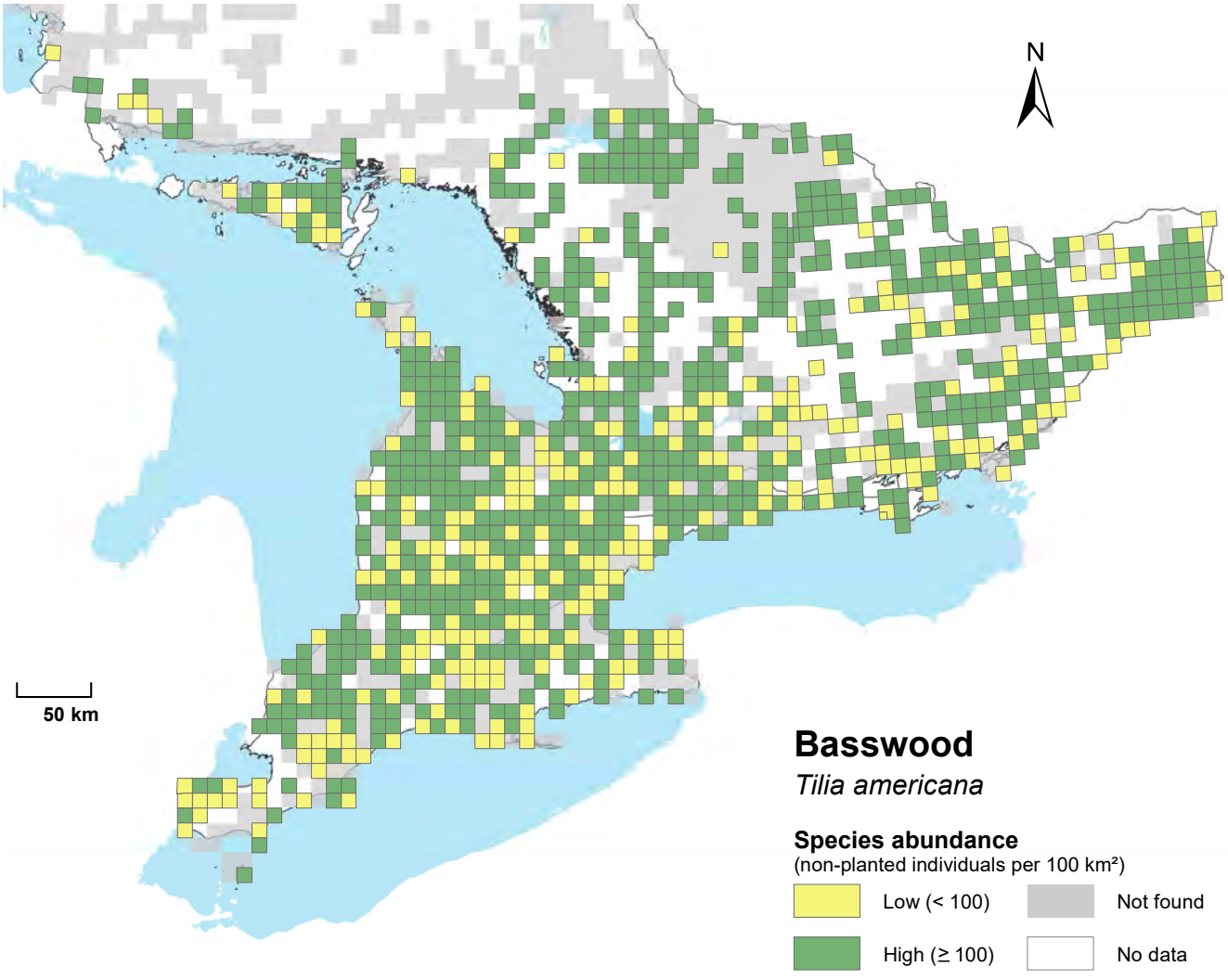
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	16%
	High (≥ 100 per 100 km²)	42%
	Regional Total (Sum)	58%
Deciduous	Low (< 100 per 100 km²)	33%
	High (≥ 100 per 100 km²)	44%
	Regional Total (Sum)	77%
% Survey squares occupied (Provincial total)		46%



Basswood | Tilleul d'Amérique

Tilia americana

The reported distribution and abundance of basswood in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Poison sumac | Sumac à vernis

Toxicodendron vernix

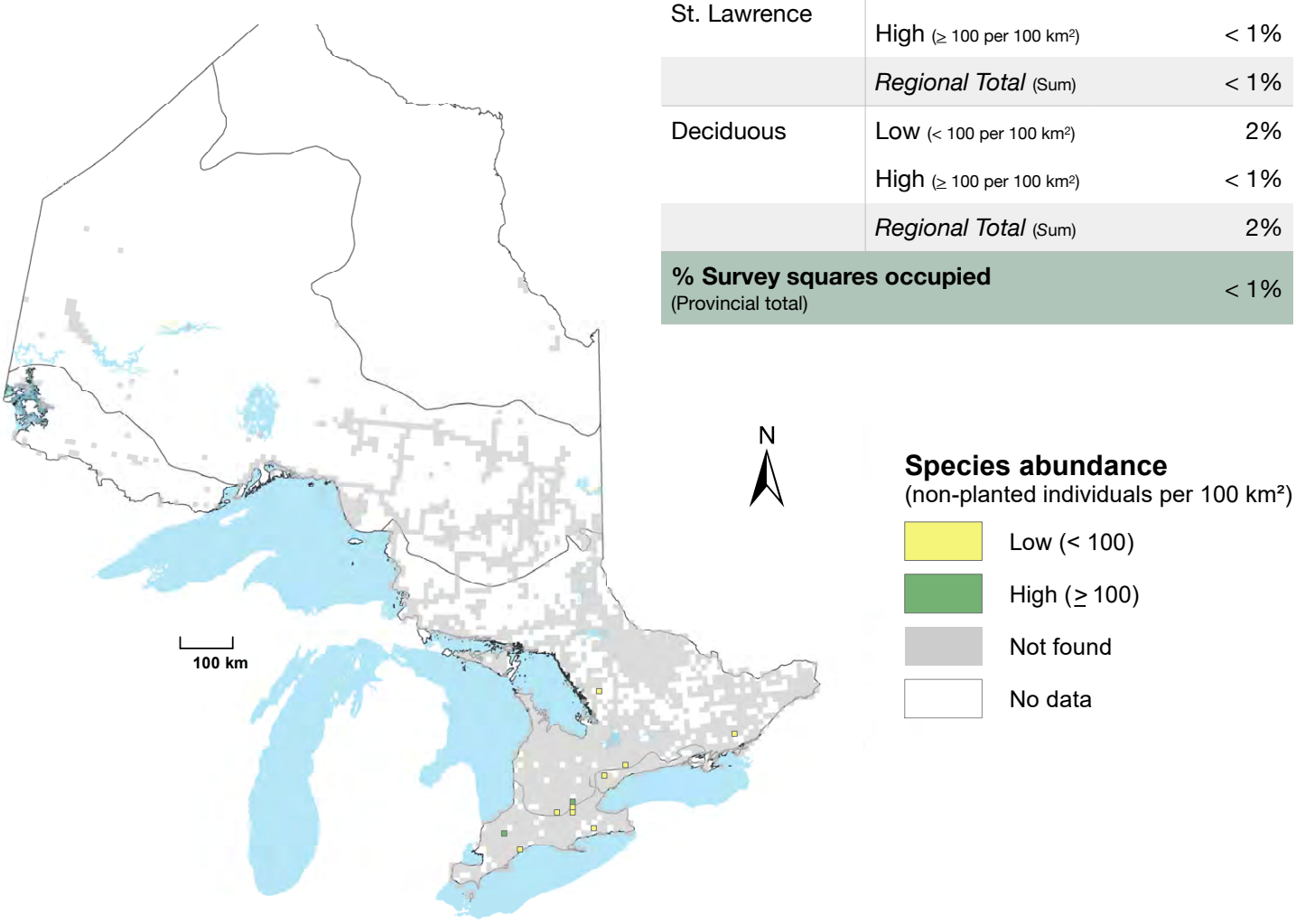
Native to Ontario

Reported distribution: Poison sumac was observed to have a limited and patchy distribution in southern Ontario. The species was observed in just 2% of squares surveyed in the deciduous forest region and in < 1% of squares in the Great Lakes - St. Lawrence forest region. It was not observed in the boreal forest.

Reported abundance: Poison sumac was relatively uncommon in Ontario. The species had a limited distribution and tended to grow at low abundance (< 100 individuals).

Table 100 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

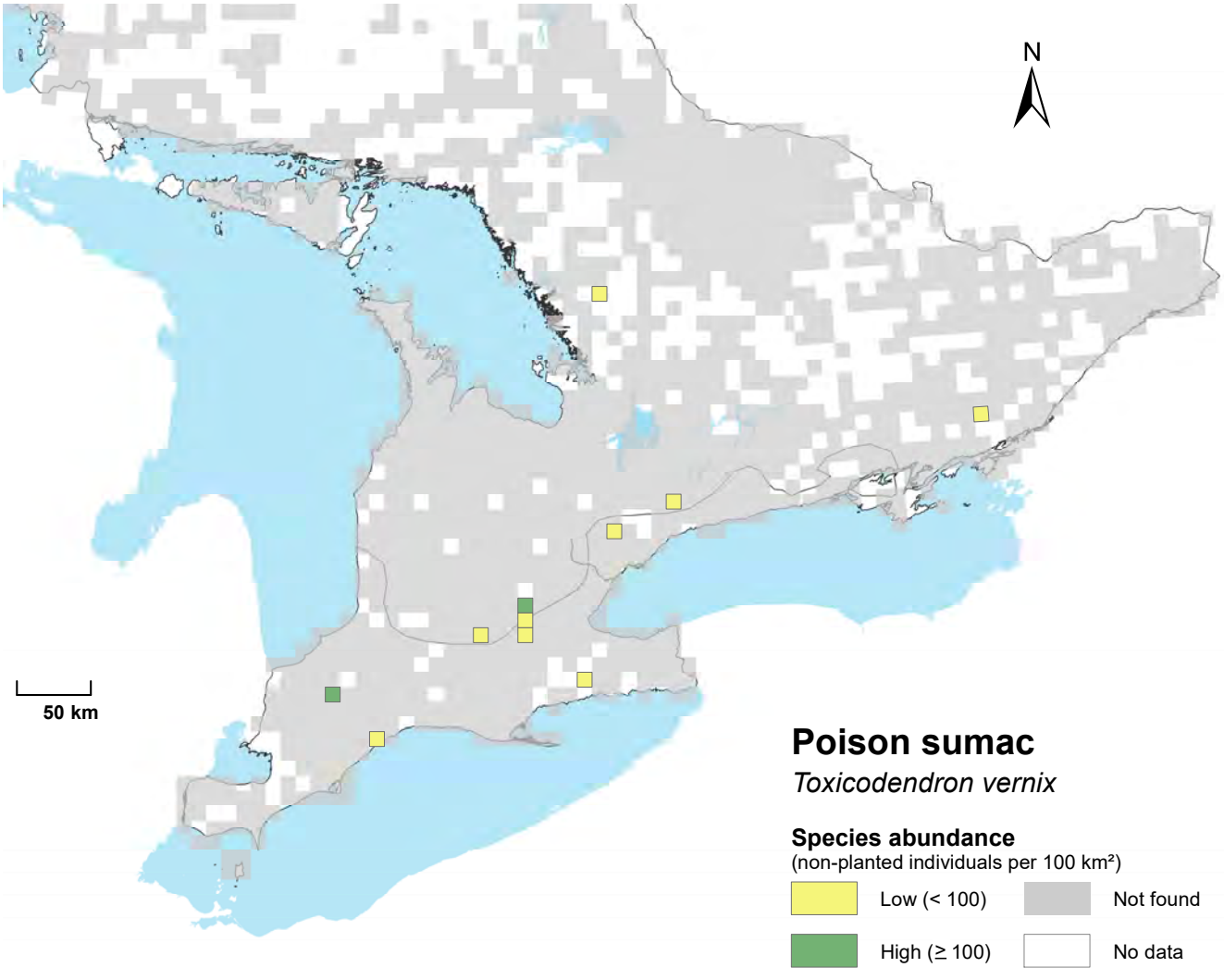
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	< 1%
Deciduous	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	< 1%
	Regional Total (Sum)	2%
% Survey squares occupied (Provincial total)		< 1%



Poison sumac | Sumac à vernis

Toxicodendron vernix

The reported distribution and abundance of poison sumac in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

White elm | Orme d'Amérique

Ulmus americana

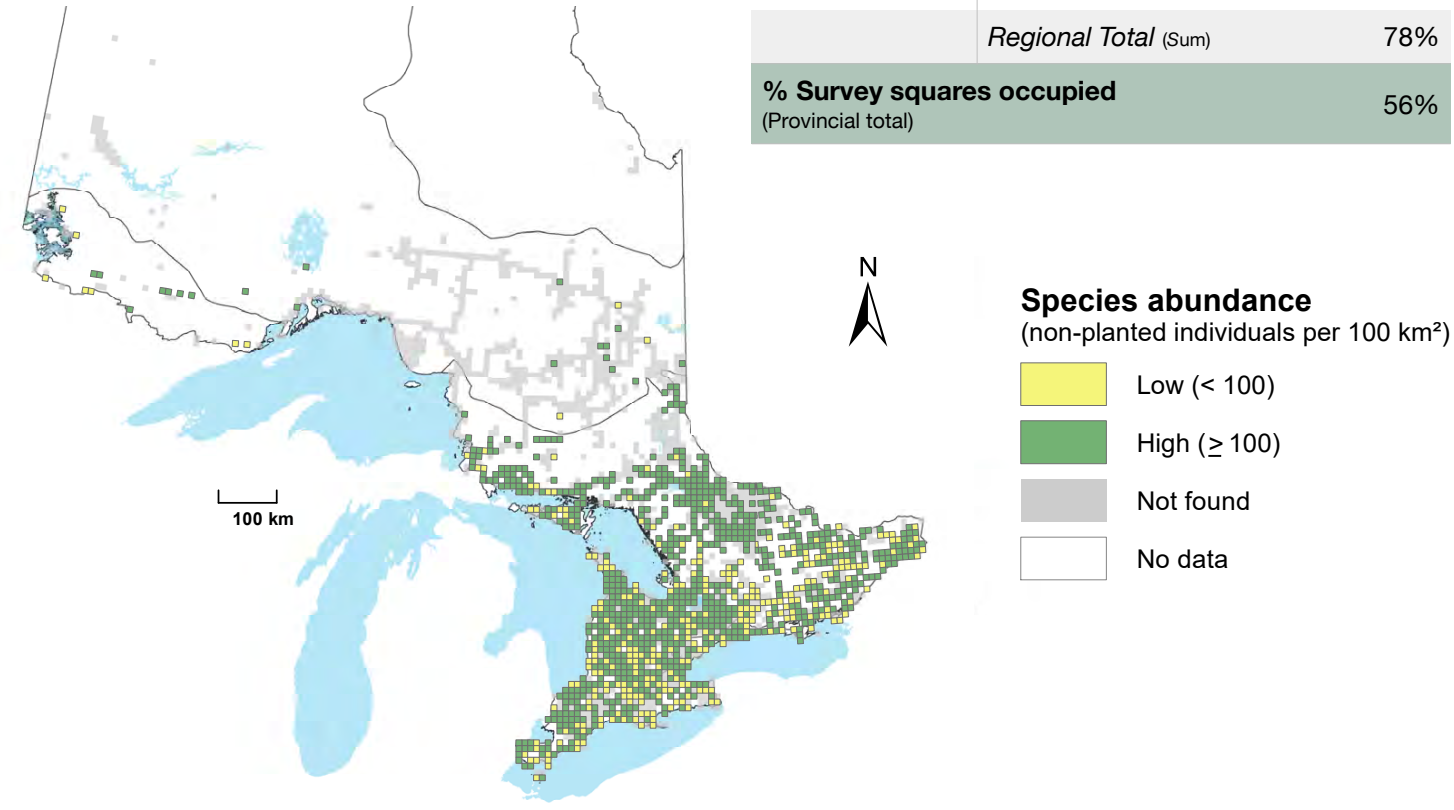
Native to Ontario

Reported distribution: White elm was mainly observed below 48°N latitude, although the species was also found in a small number of survey squares in northern Ontario. The distribution of white elm was relatively continuous within its range; it occupied 78% and 72% of surveyed squares within the deciduous and Great Lakes - St. Lawrence forest regions.

Reported abundance: White elm was a common species within its range and tended to grow at high abundance (≥ 100 individuals) in the majority of squares in which they were identified. White elm faces on-going pressure from Dutch elm disease, and while young individuals are still quite abundant, large, mature individuals are far less common than they were 50 years ago.

Table 101 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

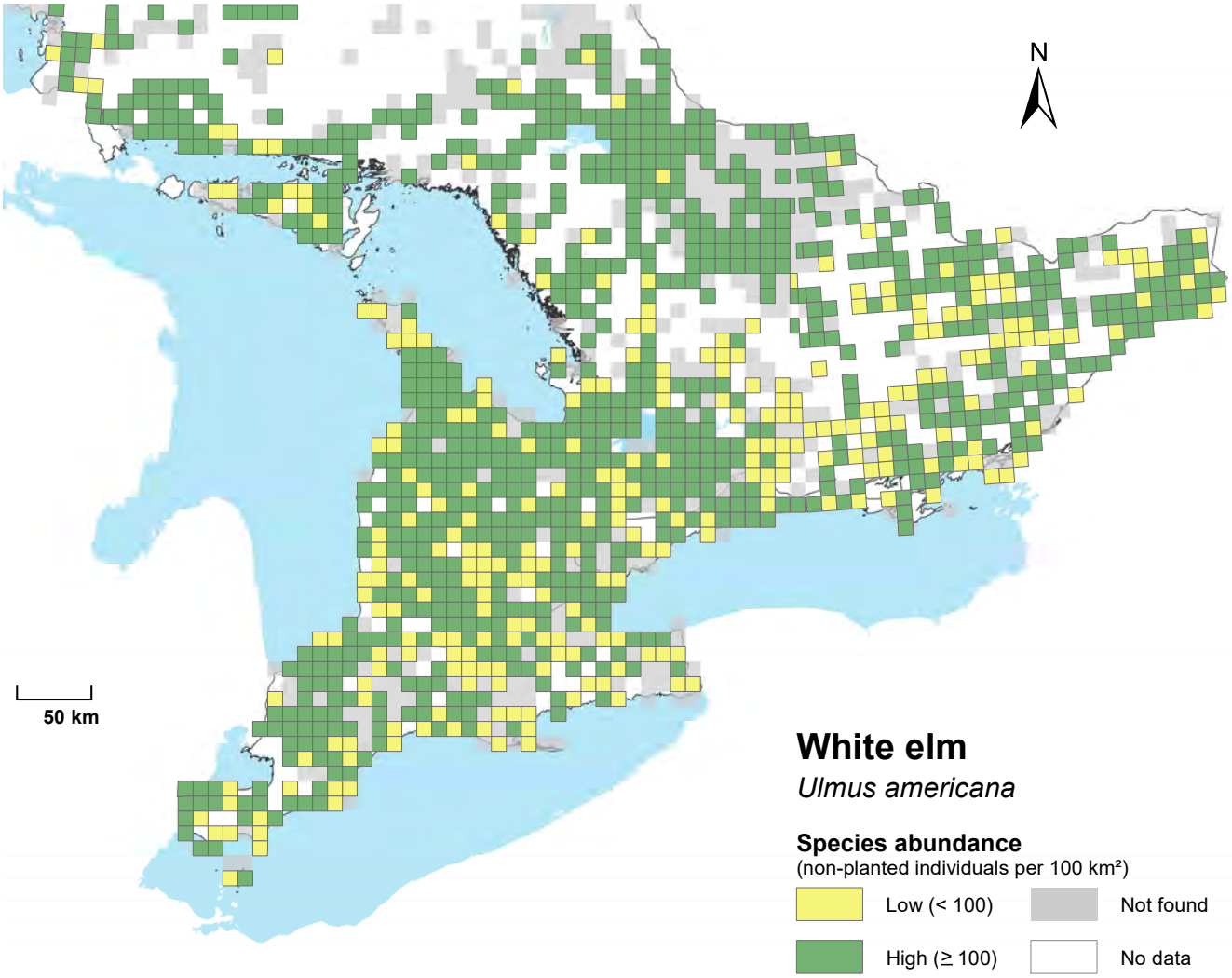
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	3%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	17%
	High (≥ 100 per 100 km²)	55%
	Regional Total (Sum)	72%
Deciduous	Low (< 100 per 100 km²)	30%
	High (≥ 100 per 100 km²)	48%
	Regional Total (Sum)	78%
% Survey squares occupied (Provincial total)		56%



White elm | Orme d'Amérique

Ulmus americana

The reported distribution and abundance of white elm in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Siberian elm | Orme de Sibérie

Ulmus pumila

Introduced to Ontario

Reported distribution: Siberian elm is an introduced species in Ontario where it was primarily identified near heavily populated areas. The species occurred in 14% of squares surveyed in the deciduous forest region and in 3% and < 1% of squares in the Great Lakes - St. Lawrence and boreal forest regions.

Reported abundance: Siberian elm tended to grow at low abundance (< 100 individuals) within its non-planted range. Its occurrence near urban areas is indicative of the species' ability to naturalize from planted individuals.

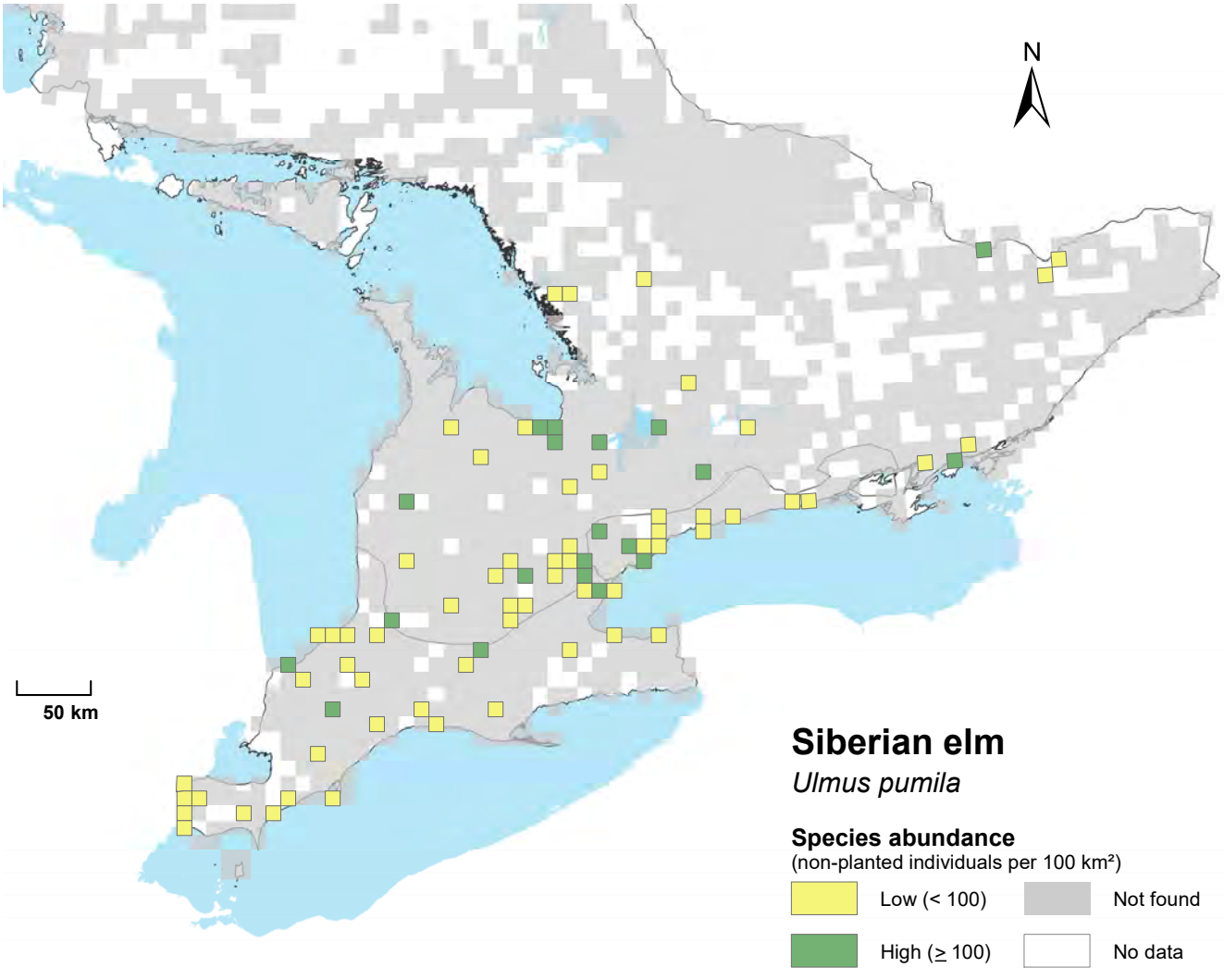
Table 102 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	< 1%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	< 1%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	2%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	3%
Deciduous	Low (< 100 per 100 km²)	12%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	14%
% Survey squares occupied (Provincial total)		4%

Siberian elm | Orme de Sibérie

Ulmus pumila

The reported distribution and abundance of Siberian elm in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Slippery elm | Orme rouge

Ulmus rubra

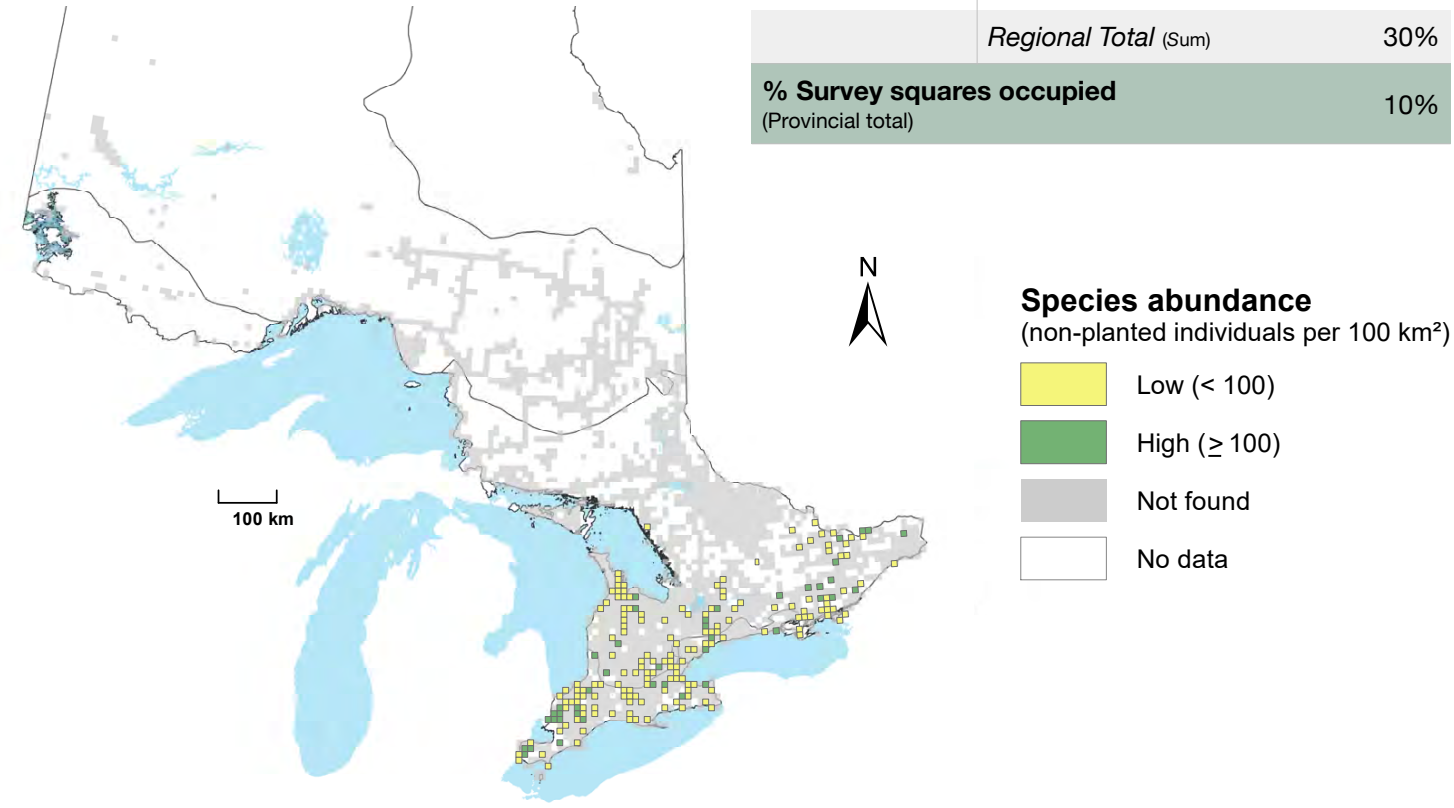
Native to Ontario

Reported distribution: Slippery elm primarily occurred in the area south of 46°N latitude in southern Ontario in a somewhat discontinuous distribution. Slippery elm were found in 30% of squares surveyed in the deciduous forest region and in 9% of squares in the Great Lakes - St. Lawrence forest region. The species was not encountered in the boreal forest.

Reported abundance: Slippery elm was relatively uncommon due to its limited distribution and tendency to grow at low abundance (< 100 individuals). The species occurred in 10% of the total squares surveyed in Ontario. Dutch elm disease has impacted the abundance of this species throughout its historic range.

Table 103 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

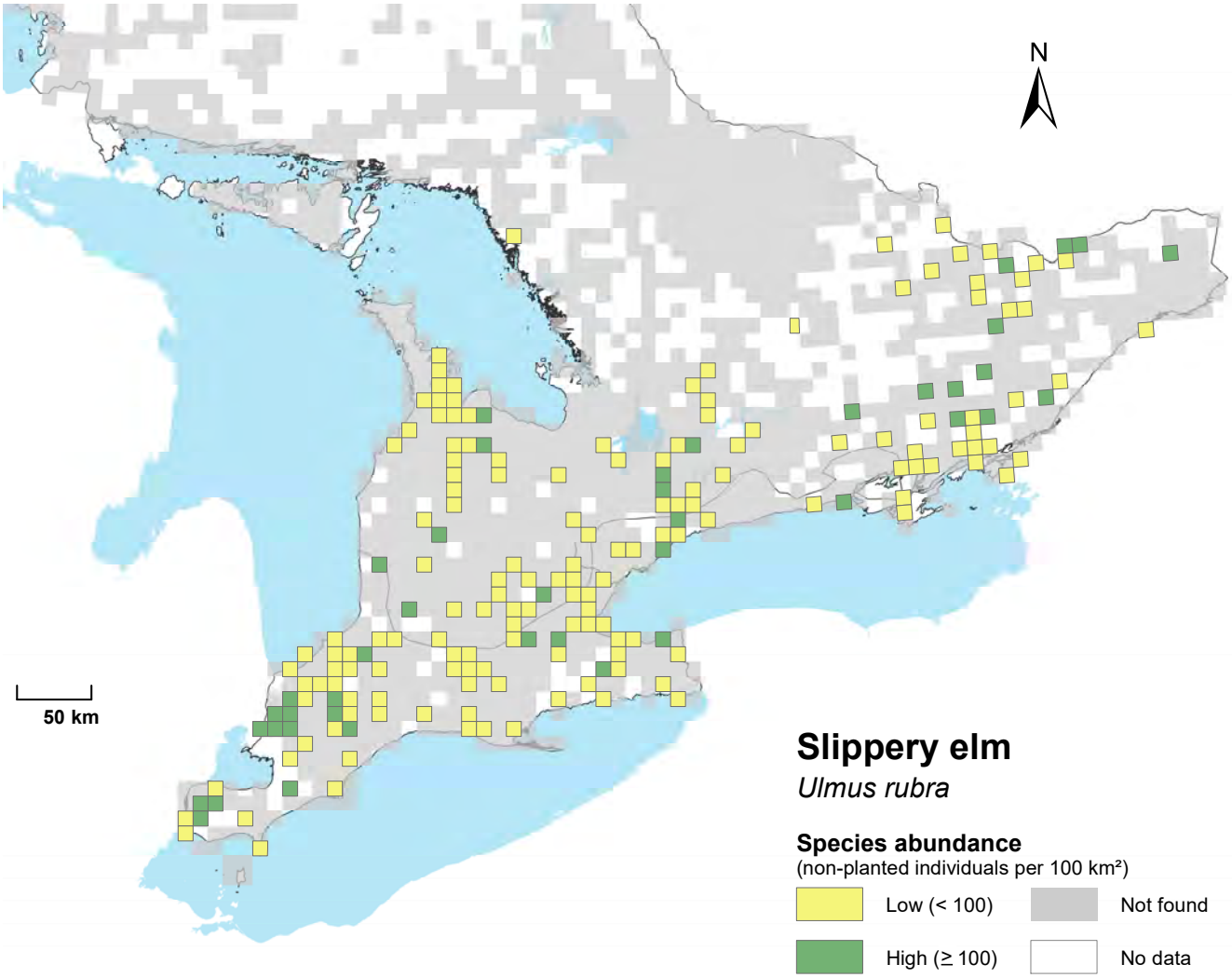
Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	7%
	High (≥ 100 per 100 km²)	2%
	Regional Total (Sum)	9%
Deciduous	Low (< 100 per 100 km²)	22%
	High (≥ 100 per 100 km²)	8%
	Regional Total (Sum)	30%
% Survey squares occupied (Provincial total)		10%



Slippery elm | Orme rouge

Ulmus rubra

The reported distribution and abundance of slippery elm in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Rock elm | Orme liège

Ulmus thomasii

Native to Ontario

Reported distribution: The distribution of rock elm generally occurred below about 46°N latitude. The species was most common in the southern portion of the Great Lakes - St. Lawrence forest region where it occupied 12% of surveyed squares. Rock elm was not observed in the boreal forest region.

Reported abundance: Rock elm was relatively uncommon at the provincial level and was observed in only 8% of the total squares surveyed. The species tended to grow at low abundance (< 100 individuals) within its range. Dutch elm disease has impacted the abundance of this species throughout its historic range.

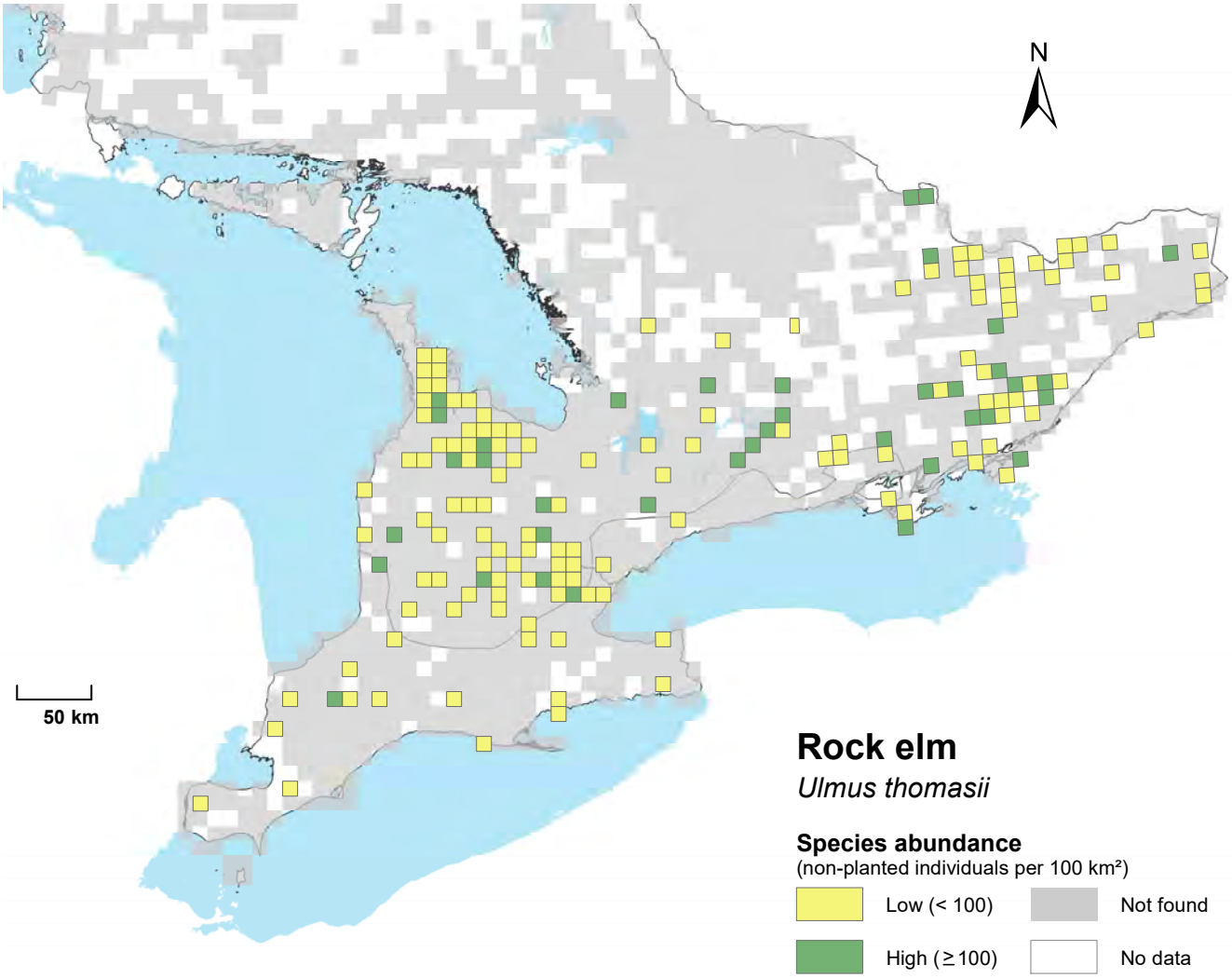
Table 104 The reported distribution of non-planted individuals in each forest region, and across the province, at levels of low and high abundance. Regional values indicate the percentages of reported survey squares occupied by a species out of the total number of squares surveyed in the region.

Region	Abundance category	Percentage occupied
Boreal	Low (< 100 per 100 km²)	0%
	High (≥ 100 per 100 km²)	0%
	Regional Total (Sum)	0%
Great Lakes - St. Lawrence	Low (< 100 per 100 km²)	9%
	High (≥ 100 per 100 km²)	3%
	Regional Total (Sum)	12%
Deciduous	Low (< 100 per 100 km²)	8%
	High (≥ 100 per 100 km²)	1%
	Regional Total (Sum)	9%
% Survey squares occupied (Provincial total)		8%

Rock elm | Orme liège

Ulmus thomasii

The reported distribution and abundance of rock elm in squares surveyed in southern Ontario (below 47°N)



Ontario Tree Atlas Project
The University of Guelph Arboretum
Coordinate System: NAD 1927 UTM Zone 17N

Regional Coordinators of the Ontario Tree Atlas Project

The following individuals participated in the Ontario Tree Atlas Project as volunteer Regional Coordinators between 1995 and 1998. Regional Coordinators helped to organize local activities and acted as a liaison between participants and the Ontario Tree Atlas Project staff.

Thank you for your assistance!

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Stan Vasiliauskas	Algonquin
Ron Flannery	Durham
James Kamstra	Durham
Bob Bolhuis	Elgin
Bernie King (Ireland)	Elliot Lake
Karen Cedar	Essex
Paul Pratt	Essex
Daryl Coulson	Hamilton-Wentworth/Brant
Darryl Beschell	Huron
Susan Van Ael	Kenora
Donald Craig	Lambton
Bruce Hood	Lanark/North and South Renfrew
Jeff Ward	Lanark/South Renfrew
Jack Henry	Leeds-Grenville
Gary Nielsen	Leeds-Grenville
Winifred Smith	Lennox-Addington/Frontenac

Coordinator	Region
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David Bradley	Middlesex
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Michael Richardson	Northumberland
Stephen Virc	Ottawa/Carleton and Prescott-Russell
Bruce Parker	Oxford
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James Thomas	Sault Ste. Marie
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Clare Liinamaa	Sudbury
Annette Van Niejenhuis	Thunder Bay
David Schmitt	Waterloo
Lloyd Ross	Wellington
Susan Wurts	York

Volunteers of the Ontario Tree Atlas Project

The Ontario Tree Atlas Project was made possible by the efforts of more than 1,300 individual volunteers and organizations. Thank you for your contributions!

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