Asian Bush Honeysuckles

Lonicera morrowii, L. tatarica, L. x bella, L. maackii

DEPARTMENT OF TRANSPORTATION

Table comparing nonnative shrubby Lonicera spp.

Table adapted from: A guide to Nonnative Invasive Plants Inventoried in the North by Forest Inventory and Analysis, Cassandra Olson and Anita F. Cholewa [4]

Table Columns – species Table Rows – Id characteristics	*L. morrowii*	*L. tatarica*	*L. x bella*	*L. maackii* (not known to be in MN)
shrub height	to 3 m (to 10')	to 3 m (to 10')	to 6 m (to 20')	to 5 m (to 16')
twigs	pubescent	glabrous	pubescent	pubescent
leaf blade shape	oval to elliptic to ovate	ovate to oblong	generally ovate	elliptic to ovate to lanceolate
leaf blade length	2.5-4 cm (1-1.5 in)	3-6 cm (1.25-2.5 in)	1.8-6 cm (0.75-2.5 in)	3.5-8.5 cm (1.4-3.3 in)
leaf apex	obtuse to acute	acute to obtuse	acute	acuminate
leaf surface (lower)	densely pubescent	glabrous	scattered pubescence to nearly glabrous	densely pubescent at least along lower veins
peduncles	5-15 mm (0.2-0.6 in), longer than petioles	15-25 mm(0.2-1 in), longer than petioles	5-15 mm (0.2-0.6 in), longer than petioles	2-4 mm (0.07-0.15 in), shorter than petioles
corolla color	creamy white fading to yellow	white to pink, not fading to yellow	pink (or white) fading to yellow	white fading to yellow
corolla surface (exterior)	pubescent	glabrous	usually glabrous	usually glabrous
berry color	deep red	red (occ. yellow)	reddish	dark red to blackish (late summer into winter)
Leaf blade (base) [3] Data from Mehrhoff	tapered	slightly heart-shaped	tapered or slightly heart-shaped (possibly on the same branch)	tapered

Information below from: Leslie Mehrhoff, University of Connecticut,
The Non-Native Honeysuckles Occurring Without Cultivation in Connecticut [3]

"This complex of 4 species, and a named hybrid consisting of lots of back crosses that make a confident determination nearly impossible, are often lumped together under the generic heading of shrubby honeysuckles." [3]

The named hybrid referred to is *L.* x *bella* or Bell's honeysuckle.

Leaf and flower variations

Between *L. tatarica* and *L. morrowii* there is hybridization resulting in variations in flower colors, hairiness and leaf forms.

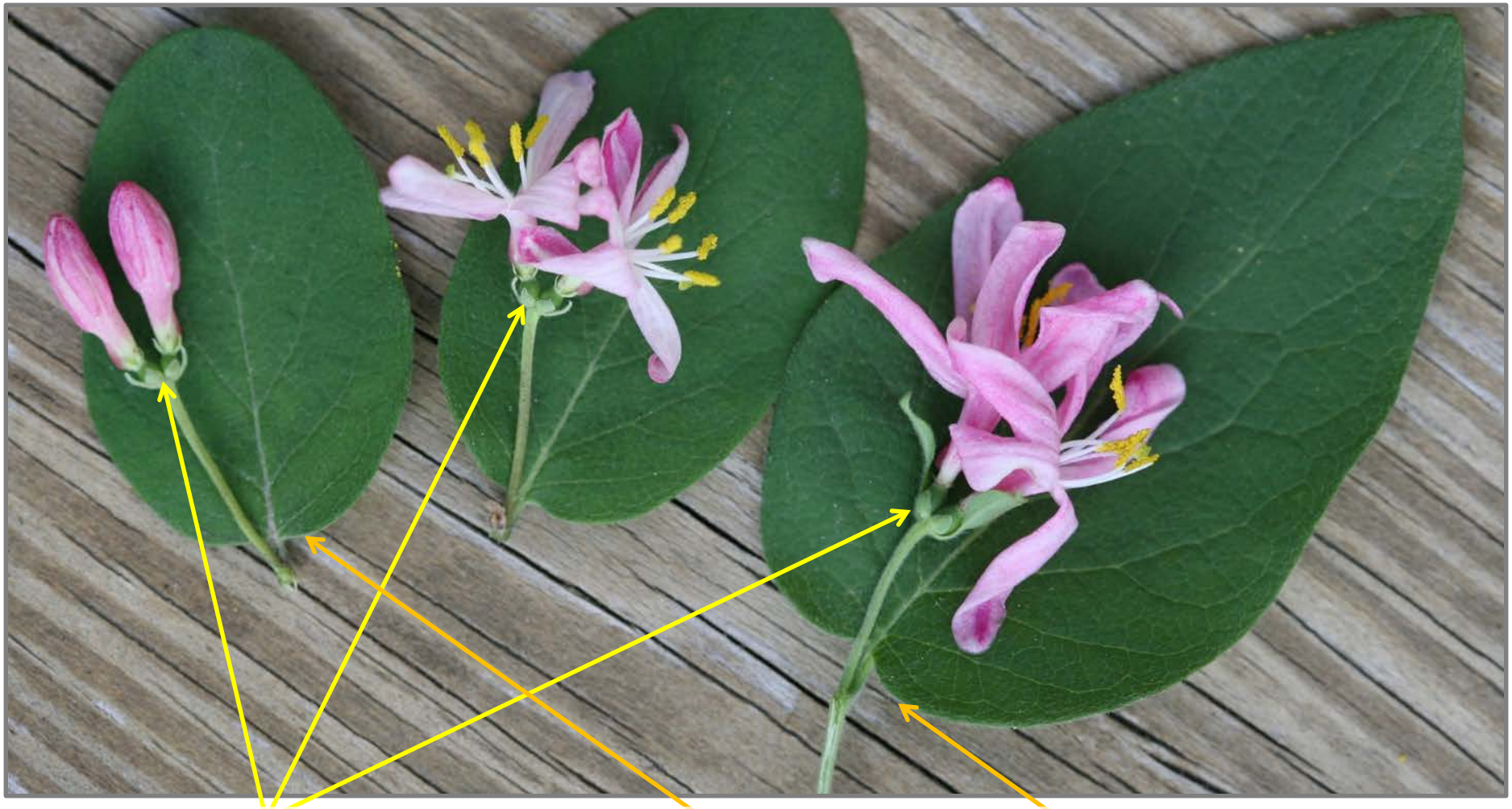
2015-5-19

Bractlet Characteristics: Tatarian honeysuckle.

Glabrous (no hairs) petioles, leaves, twigs - indicates *L. tatarica*,
Also, bractlets are “no more than half as long as the ovary they subtend [5]”

2015-5-19

Bractlet and Foliage Characteristics:



Note bractlets subtending the ovaries - in this case, all samples appear “at least half as long as the ovaries they subtend [5] ” - indicates *L. morrowii*.
Note leaves and parts are slightly hairy and margins are ciliate - indicates *L.* x *bella*.
Leaf bases are not conclusive as they vary between truncate to slightly cordate.

Compare Bractlets:

Note bractlets - “no more than half as long as the ovary they subtend $_{(5)}$” (*L. tatarica*) and “at least half as long as the ovaries they subtend $_{(5)}$” (*L. morrowii)*.
Note leaves and other parts are slightly hairy.

Lonicera tatarica

Glabrous (no hair) petioles, leaves, and twigs indicates *L. tatarica*, 2015-5-19
Also, bractlets “no more than half as long as the ovaries they subtend [5]” (*L. tatarica*).

Flower Characteristics:

Glabrous (no hair) petioles, leaves, and twigs indicates *L. tatarica*, 2015-5-19
Also, bractlets “no more than half as long as the ovaries they subtend [(5)]” (*L. tatarica*).

Flower Characteristics: 2015-5-19

Margins of sepals glabrous.

Corolla at base is gibbous (swollen to one side).

Pubescent (softly hairy) - bracts, peduncle, leaves, indicates *L.* x *bella* or *L. morrowii*.

Bractlets "at least half as long as the ovaries they subtend [5]" (*L.* x *bella* or *L. morrowii*).

Flower Characteristics: 2015-5-19

Stamens and style – hirsute (hairy). Indicates nonnative specimen.

Pubescent (softly hairy) - bracts, peduncle, leaves, indicates *L.* x *bella* or *L. morrowii*.

Bractlets "at least half as long as the ovaries they subtend [(5)]" (*L.* x *bella* or *L. morrowii*).

Flower Characteristics:

2015-5-15

White flowers fade to yellow indicates *L. morrowii*. (3)

L. x *bella* pink to white flowers may also fade to yellow. (5)

Fruit characteristics:

Glabrous - leaves and petioles, twigs - indicates *L. tatarica*.
Also, orange fruit indicates *L. tatarica*.

2015-7-5

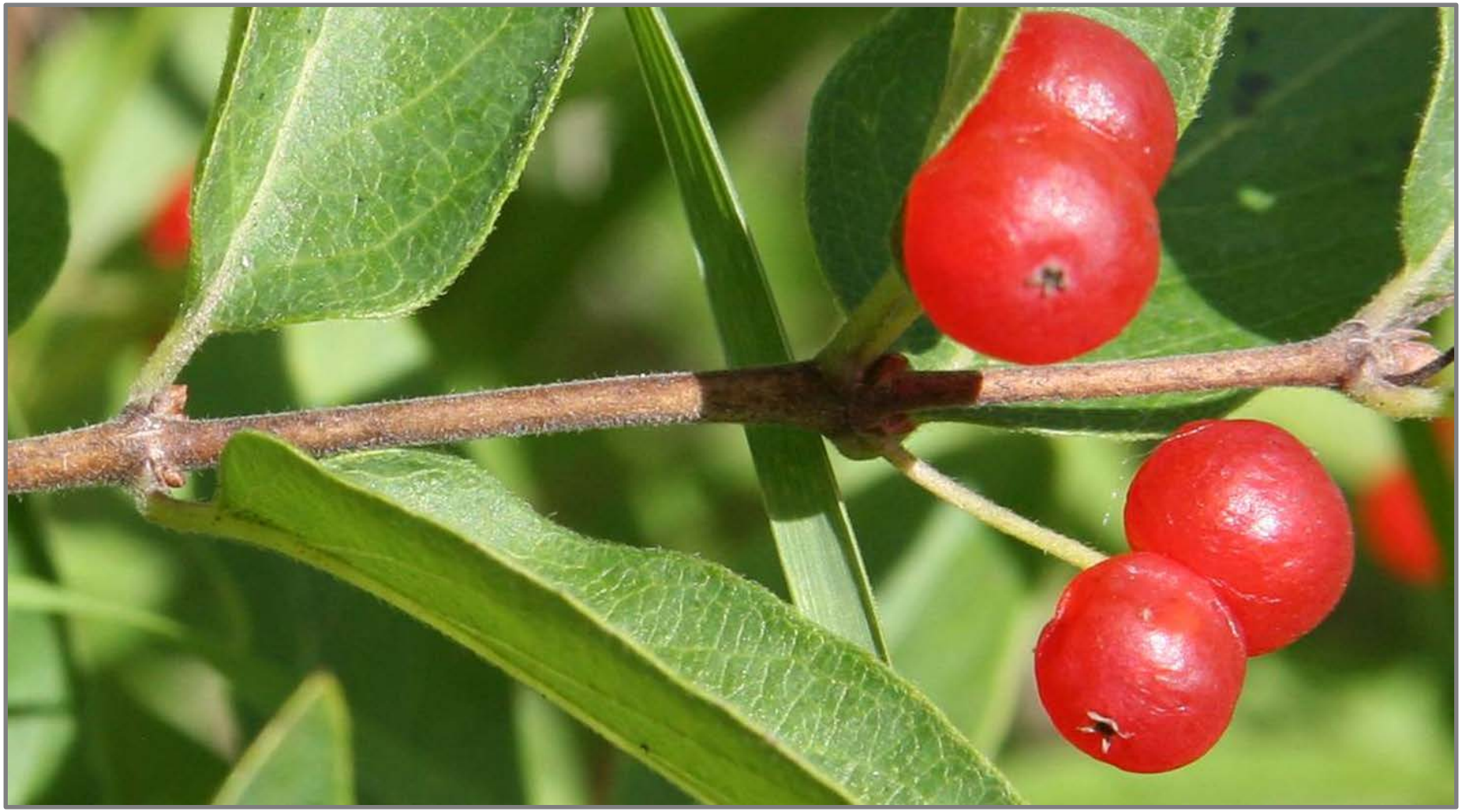
Fruit stalk
(peduncle)
characteristics

Note the peduncle (fruit stalk) length.

This length compared to the petiole length (shorter or longer) helps in species identification.

Image date 2015-5-19.

Consider All Characteristics



Long peduncles, this characteristic rules out *L. maackii.* 2015-7-22

Tapered leaf bases, not truncate (flat), not cordate (heart-shaped) indicates *L. morrowii*.

Hairs on leaves and petioles, twigs and peduncles - indicates *L. morrowii.*
Also, red fruit (*L. morrowii*). Depending on assessment of hairiness could be *L.* x *bella*.

Consider All:
Fruit, peduncles and petioles.

Again, red fruit with peduncles longer than petioles indicates (*L. morrowii*).

Hairs on leaf margins, petioles, twigs indicates *L. morrowii.*

Depending on assessment of hairiness could be *L.* x *bella*.

2015-7-22

Consider All:
Peduncles and foliage

Short peduncles (almost sessile), shorter than petioles indicates *L. maackii.*

Deep red fruit color present in October indicates *L. maackii*.

Pubescent (softly hairy) - peduncles, leaves and twigs. Leaf bases tapered, tips accuminate, long in length - all characteristics indicate *L. maackii*.

Amur honeysuckle (*L. maackii*) is not known to be present in Minnesota.

Image captured in Champaign Illinois, October 16th, 2015.

Consider All:
Fruit and foliage

Short peduncles (almost sessile), shorter than petioles indicates *L. maackii.*

Deep red fruit color present in October indicates *L. maackii*.

Pubescent (softly hairy) - peduncles, leaves and twigs. Leaf bases tapered, tips accuminate, long in length - all characteristics indicate *L. maackii*.

Amur honeysuckle (*L. maackii*) is not known to be present in Minnesota.

Image captured in Champaign Illinois, October 16th, 2015.

Heavy fruit set, fruit color is deep red. Fruit presence in October indicates *L. maackii*.

Image captured in Champaign Illinois, October 16th, 2015.

True of all Nonnative honeysuckles

Older stems, 2nd year and older, Pith is hollow and pith is brown.

Bark - vertical thin strips, often peeling. Gray to brown color.

True of all Nonnative Honeysuckles

Older stems,
2nd year and older,
pith is hollow and
pith is brown.

Bark - vertical
thin strips,
often peeling.

Gray to brown.

Following slides are a subset of:

Minnesota Native Honeysuckles

Hairy honeysuckle vines twining together. 2015-7-31

American fly honeysuckle (*L. canadensis*)

Paired fruits, opposite foliage of American fly honeysuckle.

Northern Saint Louis County 2010-06-09

American fly honeysuckle flower (*L. canadensis*)

Paired cream colored flowers and opposite foliage of American fly honeysuckle.

Northern Saint Louis County 2008-06-08

Native Wild Honeysuckle Vine (*L. dioica*)

Terminal red flowers, fused foliage of wild honeysuckle vine.

Southern Minnesota 2015-05-15 and 2016-05-20

Native Wild Honeysuckle Vine Form (*L. dioica*)

Typical forest setting of wild honeysuckle vine in bloom.

Kaplan's Woods, Steele County Minnesota 2016-05-20.

Native Hairy Honeysuckle Vine (*L. hirsuta*)

Opposite foliage of hairy honeysuckle.

Leaf margins are ciliated (see next slide).

Boundary Waters Canoe Area Wilderness, Minnesota
2011-07-20

Native Hairy Honeysuckle Vine Leaf Edge (*L. hirsuta*)

Look for small hairs on the leaf edge.

Northern Bush Honeysuckle (*Diervilla lonicera*)

Yellow flowers and foliage of
Northern bush honeysuckle.

Leaf margins are ciliated (see next slide).

Image right - Landscape planting,
Anoka County, 2006-06-28.

Image below – University of Minnesota, 2004-7-08.

Northern Bush Honeysuckle Form (*Diervilla lonicera*)

Citations and Resources

1. Dirr, M. A., 1983. Manual of Woody Landscape Plants. Stipes Publishing Company. Champaign, IL.
2. Hanson, David L. Minnesota Department of Transportation, Roadside Vegetation Management, All images.
3. Mehrhoff, Leslie J. The Non-native Honeysuckles Occurring Without Cultivation in Connecticut. Notes from the G. Stafford Torrey Herbarium, N. S. 1. University of Connecticut.
4. Olson, Cassandra and Anita F. Cholewa, A Guide to Nonnative Invasive Plants Inventoried in the North by Forest Inventory and Analysis, United States Department of Agriculture, Forest Service, Northern Research Station, General Technical Report NRS-52.
5. Smith, Welby. 2008. Trees and Shrubs of Minnesota. University of Minnesota Press.

PowerPoint compiled by Dave Hanson,
Minnesota Department of Transportation,
Roadside Vegetation Management.

DEPARTMENT OF TRANSPORTATION