

CHECKLIST OF CULTIVATED MAPLES.

IV. ACER SACCHARINUM L.

by Frank S. Santamour, Jr. and Alice Jacot McArdle

Old silver maples (*Acer saccharinum* L.) still abound along city streets and in parks and private grounds in most of the large urban areas of north-eastern United States and eastern Canada. Some are still being planted by homeowners who want a "fast-growing" tree, but municipalities have drastically curtailed the use of this species (2). In some jurisdictions, silver maple has been placed on a list of trees that are "forbidden" to be planted.

Silver maple has the reputation of being "weak-wooded" and thus subject to breakage in storms. Its roots invade water lines and septic tanks. Its seedlings sprout abundantly in lawns, gutters, and gardens. But still, this swamp-dwelling American native does have the kind of "urban tolerance" needed for survival in a deteriorating environment. New selections should be made and tested before we relegate this species to the horticultural "scrap-heap."

The scientific name *Acer saccharinum* L. is undeniably the valid and accepted name for this species. The use of *A. dasycarpum* Ehrhart, as practiced by several nurseries, is apparently an attempt to avoid possible confusion of the name *A. saccharinum* with *A. saccharum* (sugar maple). The use of incorrect nomenclature usually creates more problems than it solves.

This checklist of silver maple cultivars is the fourth in our current series. Previous checklists (3, 4, 5) have been published on red maple (*A. rubrum* L.), sugar maple (*A. saccharum* Marshall), and Norway maple (*A. platanoides* L.). There are hundreds of cultivars of the "ornamental" Japanese maple (*A. palmatum* Thunberg), and while a completely authoritative checklist is not currently available, the work of Vertrees (6) should be consulted as a reference. There is, perhaps, only one more maple species in which there has been sufficient selection and nomenclatural activity to warrant a checklist, and

that is *A. pseudoplatanus* L., the sycamore maple or "sycamore" of Europe. Inasmuch as *A. pseudoplatanus* is not particularly well adapted to the United States or widely used here, we have decided not to extend our work to this species.

Cultivar checklists are published to establish and maintain stability in the nomenclature of cultivated plants according to the International Code of Nomenclature for Cultivated Plants (1). The U.S. National Arboretum assumed temporary International Registration Authority for unassigned genera of woody plants on January 1, 1981. These "unassigned" genera include all those for which comprehensive checklists have not yet been published by other agencies or organizations — that is, the majority of woody landscape plants. Nurserymen, horticulturists, or scientists who wish to register a new cultivar or who desire information relative to the registration process are urged to contact Dr. T.R. Dudley, International Registrar, at the U.S. National Arboretum, Washington, D.C. 20002.

In the checklist that follows, **VALID CULTIVAR** names are given in boldface capitals and **INVALID CULTIVAR** names in lightface capitals.

ALBO-MACULATUM (F. Pax, Bot. Jahrb. 7: 177-263, 1886) — leaf base cuneate, leaf spotted white, = **VARIEGATUM**.

ALBO-VARIEGATUM (F.L. Spaeth, Gartenzeitung 1883, p. 513) — leaves mottled white, = **VARIEGATUM**.

ARBUSCULA (F. Schwerin, Gartenflora 42: 161-714, 1893) — shrub, branches numerous, autumn leaves red.

ARGENTEUM STRIATUM (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1875, p. 6) — variegated foliage.

ASPLENIFOLIUM (H.J. Grootendorst, Dendroflora Nr. 6, 1969, p. 3-18) — origin given as "De Bie-van Aalst, 1925," tree more upright than 'Wieri'; leaves less spreading, deeply cut, often with small holes.

AUREO-VARIEGATUM (H.M. Willkomm, Laubholzer, Zierbaume und Straucher des Hochfürstlich von Rohanschen Garten zu Sichrov, p. 1-2, 1879) — leaves variegated yellow.

AUREUM (Naperville Nurs., Naperville, Illinois, General Price List No. 355, Fall 1934, p. 3) — as Golden maple.

BEEBE = **BEEBE CUTLEAF WEeping**

- BEEBE CUTLEAF WEeping** (Cole Nurs. Co., Painesville, Ohio, Cat. Fall 1953, p. 1) — horizontal branching habit.
- BICOLOR** (F. Schwerin, Mitt. Deutsch. Dendr. Ges. 10: 58-65, 1901) — leaves flecked yellow, not as beautiful as other variegated forms, variegation more apparent as leaf matures.
- BLAIR** (Marshall's Nurs., Arlington, Nebraska, Handbk. Trees and Plants, undated, rcd. by USDA Library, February 21, 1939, p. 6) — upright growth habit, short strong limbs, less subject to storm injury. Originated in Blair, Nebraska.
- BORNS GRACIOSA** (G. Krussmann (as Kru.), Deutsche Baumschule 11: 21-22, 1959, illus.) — leaves deeply incised, and different from other laciniata forms. To be introduced by Georg Born Nurs., Rosenheim-Westerndorf, Germany. Name invalid because in Latin form after January 1, 1959.
- BORUS GRACIOSA** — Name found in records of Plant Sciences Data Center of the American Horticultural Society, = **BORNS GRACIOSA**.
- CHLOROCINCTUM** (C. Grebbers, Mitt. Deutsch. Dendr. Ges. 14: 209, 1905) — leaves gray green with dark green irregular margin, a seedling raised by author.
- CITREO-VARIEGATUM** (F. Schwerin, Gartenflora 42: 161-714, 1893) — leaves dotted pale lemon.
- CRISPUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1875, p. 6) — with delicately cut and curled foliage.
- CRISPUM NOVUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1880, p. 6, illus.) — foliage deeply cut and crimped, tree of compact growth. Raised by Ellwanger & Barry.
- CUNEATUM** (F. Pax, Bot. Jahrb. 7: 177-263, 1886) — foliage 3- to 5-lobed, base cuneate.
- CURVATUM** (F. Schwerin, Gartenflora 42: 161-714, 1893) — leaf lobes falcate.
- CUTLEAF** (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 5) = **WIERII LACINIATUM**.
- DILACERATUM** (F. Schwerin, Mitt. Deutsch. Dendr. Ges. 10: 58-65, 1901) — leaf margin irregularly torn, with gray or yellow streaks on margin.
- DISSECTIFOLIUM** (G.B. Sudworth, USDA Forest Serv. Bull. 14, 1897, p. 289) = **DISSECTUM**.
- DISSECTUM** (F. Pax, Bot. Jahrb. 7: 177-263, 1886) — leaves malformed, small, edged white.
- ELEGANT** (H.J. Grootendorst, Dendroflora Nr. 6, 1969, p. 3-18) — new name, more compact than most trees of the species, leaves cut to about one-half leaf length.
- FASCIATUM** (E.-A. Carriere, Production et Fixation de Varietes dans les Vegetaux, Paris, 1885, p. 43) — monstrous, fasciated branches.
- FASTIGIATUM** (H.J. Grootendorst, Dendroflora Nr. 6, 1969, p. 3-18) = **PYRAMIDALE**.
- FLORIDANUM MACROPHYLLUM** (G. Nicholson, Gard. Chron. II. 15: 136-137, 1881) — without description.
- FLORIDANUM PALMATUM** (G. Nicholson, Gard. Chron. II. 15: 136-137, 1881) — without description.
- GOLDEN** (Jewell Nurseries Inc., Lake City, Minnesota, Wholesale Price List, Fall 1947-Spring 1948, p. 10) — without description. Described later, Fall 1949-Spring 1950, p. 9, as a sport of silver maple attractive for its orange-gold bark. May have been sold since 1920's. Records of the Plant Sciences Data Center of the American Horticultural Society list a 'Golden' silver maple growing at the Arnold Arboretum, Jamaica Plain, Massachusetts. The Arnold tree was obtained from Cole Nursery Co., Painesville, Ohio in 1953 and may be the cultivar sold as 'Lutea.'
- HANCE'S VARIEGATED** (A. Hance & Son, Red Bank, New Jersey, Cat. 1879, p. 3, illus. on frontispiece) — leaves regularly striped, splashed with creamy white throughout growing season, withstands sun.
- HETEROPHYLLUM** (G. Krussmann, Handbuch der Laubgehölze, Berlin, 1960, p. 121) = **HETEROPHYLLUM LACINIATUM**.
- HETEROPHYLLUM LACINIATUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1880, p. 6, illus. p. 7) — luxuriant erect grower with handsomely cut or dissected leaves, differs from Wier's in having foliage more deeply cut. Raised by Ellwanger & Barry.
- IMPROVED** (B.O. Mulligan, Maples cultivated in the United States and Canada, Amer. Assoc. Bot. Gard. & Arbor., 1958, p. 51) — without description, plant at Morton Arboretum, Lisle, Illinois. E.L. Kammerer, Morton Arb. Bull. 27(5): 21-24, 1952, wrote of a superior type resistant to storm breakage being grown by Hinsdale Nursery, Hinsdale, Illinois. Their 1953 catalog (p. 6) listed the selection as var. *pyramidale*, Pyramidal Silver Maple, Improved Silver Maple.
- JUHLKEI** (Jurrisen in Neubert's Deutsch. Gart. Mag. 1886, p. 353) = **VARIEGATUM**.
- LACINIATUM** (F. Pax, Bot. Jahrb. 7: 177-263, 1886) — as cultivar grex, or group, name for trees with deeply dissected leaves.
- LACINIATUM BEEBE** (B. Harkness, Phytologia 9: 428-430, 1964) = **BEEBE CUTLEAF WEeping**.
- LACTESCENS** (F. Schwerin, Gartenflora 41: 501, 1892) — leaves speckled gray and white.
- LACTEUM** (F. Schwerin, Gartenflora 42: 161-714, 1893) — leaves milky white, veins green.
- LONGIFOLIUM** — Listed as in Spaeth (1882) by L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, Berlin, 1903, p. 298 — leaf lobes long acuminate, base cordate.
- LUTEA** (Cole Nursery Co., Painesville, Ohio, Cat. Fall 1953, p. 1) — as Golden silver maple, bark orange on young branches, fall leaf color yellow, = **LUTEUM** to correct orthography.
- LUTESCENS** (F.L. Spaeth, Gartenzeitung 1883, p. 513) — young leaves orange, later yellow-green.
- LUTEUM** (B.O. Mulligan, Maples cultivated in the United States and Canada, Amer. Assoc. Bot. Gard. & Arbor., 1958, p. 25) — without description, plant at the Morton Arboretum, Lisle, Illinois, received from Cole Nursery Co., Painesville, Ohio as 'Lutea.'
- MACROPHYLLUM** (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 187) — leaves very large.
- MONSTROSUM** (G. Nicholson, Gard. Chron. II. 15: 136-137, 1881) — without description.
- MONSTROSUM AUREO-VARIEGATUM** (A. Wesmael, Bull. Soc. Roy. Bot. Belg. 29: 17-65, 1890) — without description.
- NANUM** (F. Schwerin, Gartenflora 42: 161-714, 1893) — shrubby, globose form.
- NERVOSUM** (A. Wesmael, Bull. Soc. Roy. Bot. Belg. 29: 17-65, 1890) — without description.
- NOVUM** (G.B. Sudworth, USDA Forest Serv. Bull. 14, 1897, p. 289) = **CRISPUM NOVUM**.
- PALMATUM** (H. Zabel, Systematisches Verzeichniss der in den Garten der K. Preuss. Forstakademie zu Kultivirten Pflanzen, Munden, 1878, p. 11) — leaves pale green,

sinuses deep, nearly closed by lobes.

- PAVIA** (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 181) — J.C. Loudon, *Trees & Shrubs: An abridgement of The Arboretum et Fruticetum Britannicum*, 1875, p. 90, stated "the last named variety, introduced by Messrs. Booth, has received the absurd name Pavia, from the upper surface of the leaves being slightly wrinkled, somewhat in the manner of the horse chestnut."
- PENDULUM** (L. Van Houtte, *Flores des Serres et des Jardins de l'Europe* 21: 19, 1875) — branches pendulous.
- PIPAL** (Cole Nursery Co., Painesville, Ohio, Cat. Fall 1957, p. 1) — seedless form, leafing out earlier in spring and holding later in fall. Apparently named for Frank Pipal, city forester in Omaha, Nebraska.
- PSEUDOTERNATUM** (F. Schwerin, *Gartenflora* 42: 161-714, 1893) — leaves trifoliolate.
- PULVERULENTUM** (F.L. Spaeth, *Gartenzeitung* 1883, p. 513) — leaves dotted white, = **VARIEGATUM**.
- PYRAMIDAL** (H.P. Kelsey and W.A. Dayton, *Standardized Plant Names*, 1942, p. 5) = **PYRAMIDALE**.
- PYRAMIDALE** (F.L. Spaeth Nurs., Berlin, Cat. No. 109, 1901-1902, p. 64) — branches erect, tree pyramidal, first listed in 1885-86 catalog.
- PYRAMIDALIS** (Naperville Nurs., Naperville, Illinois, General Price List No. 355, Fall 1934, p. 3) — may = **PYRAMIDALE**.
- RUBELLUM** (F. Schwerin, *Mitt. Deutsch. Dendr. Ges.* 10: 58-65, 1901) — upper leaf surface pale red through growing season, turns light blood red in fall.
- RUBRUM** (Hillier & Sons Nurs., Winchester, England, Cat. No. 38-T, *Trees & Shrubs*, 1928, p. 8-12) — leaves turning red in autumn.
- SAIRA** (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 189) — as *A. Saira* Hort. and received as such from the nursery of J. Mohnhaupt, Breslau. Leaves pale and delicate, apparently a selection of *A. saccharinum*.
- SANGUINEUM** (F. Schwerin, *Gartenflora* 42: 161-714, 1893) — young leaves red, turning green.
- SCHWERINII** (L. Beissner, *Mitt. Deutsch. Dendr. Ges.* 11: 104, 1902) — branches erect, leaves dissected.
- SERPENTINUM** (F. Schwerin, *Gartenflora* 42: 161-714, 1893) — branches serpentine.
- SHERIDAN** (Sheridan Nurs., Oakville, Ontario, Canada, Cat. 1980, p. 18) — fast growing selection.
- SILVER QUEEN** (Inter-State Nurs., Hamburg, Iowa, Cat. Spring 1966, p. 17) — entirely seedless, hardy, fast growing.
- SKINNERI** (Naperville Nurs., Naperville, Illinois, General Price List No. 355, Fall 1934, p. 3) — as Skinner's cutleaf maple. Tree originally found in nursery of J.H. Skinner & Co., Topeka, Kansas. *Illus. Amer. Nurseryman* 68(8): 13, 1938.
- SOUVENIR LOUIS VAN HOUTTE** (L. Beissner, E. Schelle, and H. Zabel, *Handbuch der Laubholz-Benennung*, Berlin, 1903, p. 298) = **AUREO VARIEGATUM**.
- TREFOIL** (H.P. Kelsey and W.A. Dayton, *Standardized Plant Names*, 1942, p. 5) = **TRIPARTITUM**.
- TRICOLOR** (A. Wesmael, *Bull. Soc. Roy. Bot. Belg.* 29: 17-65, 1890) — without description.
- TRIFOLIATUM** (A. Wesmael, *Bull. Soc. Roy. Bot. Belg.* 29: 17-65, 1890) — without description.
- TRILOBATUM** (F. Schwerin, *Mitt. Deutsch. Dendr. Ges.* 10: 58-65, 1901) — leaves exactly 3-lobed.

- TRIPARTITUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1880, p. 8, *illus.* p. 8) — vigorous, upright grower with deeply lobed foliage, leaves being cut nearly to the midrib. Raised by Ellwanger & Barry.
- VARIEGATUM** (H. Zabel, *Systematisches Verzeichniss der in den Garten der K. Preuss. Forstakademie zu Kultivirten Pflanzen*, Munden, 1878, p. 11) — without description.
- VILLOSUM** (P. Ascherson, *Flora der Provinz Brandenburg*, Berlin, 1860-64, p. 52, 114-116) — samara villose over nutlet.
- WAGNERI** (Haage & Schmidt Nurs., Haupt-Verzeichniss uber Samen und Pflanzen, Erfurt, Prussia, 1865, p. 36) — with large, deeply-incised leaves.
- WAGNERII** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1867-68, p. 14) = **WAGNERI**.
- WAGNERI DISSECTUM** (Auguste Van Geert, Nurs., Gand, Belgium, Cat. 1874-75, p. 122) = **WAGNERI**.
- WAGNERI LACINIATUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1875, p. 6) = **WAGNERI**.
- WEEPING** (H.P. Kelsey and W.A. Dayton, *Standardized Plant Names*, 1942, p. 5) = **PENDULUM**.
- WIER** (H.P. Kelsey and W.A. Dayton, *Standardized Plant Names*, 1942, p. 5) = **WIERII LACINIATUM**.
- WIERI** (F. Schwerin, *Gartenflora* 42: 161-714, 1893) = **WIERII LACINIATUM**.
- WIERI LACINIATUM** (Anon., *The Garden* 20: 220, 1881) = **WIERII LACINIATUM**.
- WIEREII** = **WIERII LACINIATUM**.
- WIERII LACINIATUM** (Ellwanger & Barry — Mount Hope Nurs. — Rochester, New York, Cat. 1875, p. 6, *illus.* p. 7) — as Wier's cut-leaved silver maple, apparently first introduced in 1873, foliage abundant, deeply and delicately cut. Discovered by D.B. Wier, Lacon, Illinois (*The Garden* 12: 82, 1877) and sold to Ellwanger & Barry about 1870. *Illus. Amer. Nurseryman* 68(8): 13, 1958.
- WIER'S CUT-LEAVED** = **WIERII LACINIATUM**.
- WILLIS' CUTLEAF** (Willis Nurs. Co., Ottawa, Kansas, Wholesale Price List, Fall 1937, p. 11) — leaves deeply shredded. *Illus.* in *Amer. Nurseryman* 68(8): 13, 1938, along with **WIERII LACINIATUM** and **SKINNERI**.
- WILLISII** (B.O. Mulligan, *Maples cultivated in the United States and Canada*, *Amer. Assoc. Bot. Gard. & Arbor.* 1958, p. 25) — without description, = **WILLIS' CUTLEAF**.
- YELLOW BRONZE** (H.P. Kelsey and W.A. Dayton, *Standardized Plant Names*, 1942, p. 5) = **LUTESCENS**.

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ABSTRACT

Karnosky, David F. and T.R. Myers. 1982. **Pollution: new factor in diagnosis of tree damage.** *Weeds, Trees & Turf* 21(2): 38, 42, 46.

Air pollution is one of the many unnatural stress factors affecting the growth and survival of shade trees in and around urban areas. Concentrations of ozone, sulfur dioxide, and suspended particulates frequently exceed federal air quality standards throughout much of the United States. This article is aimed at providing practicing arborists with a better understanding of the air pollution problems they may encounter. In the second article in this series, we will examine differences in responses of trees to air pollution and describe which shade trees can best tolerate pollution problems. While there are many different types of air pollutants, arborists are unlikely to encounter tree problems for most of them. Some pollutants which commonly cause tree injury are ozone, sulfur dioxide, herbicide drift, and deicing salt spray.