CHECKLISTS OF CULTIVARS OF LINDEN (TILIA) SPECIES

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Abstract. The difficulties of taxonomy in Tilia are many and varied. Cultivars of Tilia are described and discussed under the European species T. cordata, T. platyphyllos, and T. tomentosa, as well as the only United States species recognized, T. americana. The hybrids T. X europaea (T. cordata X T. platyphyllos) and T. X flavescens (T. americana X T. cordata) are also recognized as having valid cultivars. Several cultivars of doubtful hybrid origin are listed under the species they most resemble while some are grouped under “other hybrids.”

Tilia is taxonomic torture.

Consider the species of eastern North America, north of Mexico, for which more than 100 “scientific” names have been propounded. A brief tour through some of the more significant works on American Tilia could begin with Asa Gray, who in 1887 (3) recognized 3 species in this region. John K. Small, in 1903 (10), described 8 species and later, Charles Sprague Sargent, in 1918, (9) distinguished 14 species and 14 varieties. In Alfred Rehder’s “Manual” (6), 5 species were recognized and in his “Bibliography” (7) the number was 6. The 1968 monograph of Jones (5) once again brought the number down to 3 species. In all of the work cited above, the differences between species were based largely on leaf pubescence.

The combination of biochemical and morphological analyses used by Hickok and Anway (4) allowed the recognition of only one species, T. americana L. We have, somewhat gratefully, followed this last concept, which we consider to be horticulturally sound. We have not, in this manuscript, made any judgements on botanical varieties of T. americana.

According to Jones’ (5) “conservative” estimate, there are 30 species of Tilia. Four are native to North America, 6 are found in Europe, and the remainder occur in eastern Asia. It may be, that with increased knowledge of intraspecific variation patterns, this number may be reduced further.

How many species of Tilia are there in Europe? We recognize only 4: T. cordata Miller, T. dasystyla Steven, T. platyphyllos Scopoli, and T. tomentosa Moench (which includes T. petiolaris DC). The species named T. europaea L. (= T. vulgaris Hayne) is widely distributed throughout Europe, but is best considered as T. X europaea L., a natural hybrid between T. cordata and T. platyphyllos. No cultivars of T. dasystyla have been found.

The Asiatic species of Tilia are rare in cultivation in the West, and we have not been able to find any literature on selected cultivars.

Some idea of the nomenclatural problems encountered in Tilia may be obtained from a simple summary of the taxonomic tour de force of Wagner (11, 12). In an index of 389 binomials, that did not include names sunk in synonymy, he listed 108 new varietal names and 49 new hybrid epithets, nearly all dealing with European species. Thirty-six varieties were described for T. cordata, of which 20 were supposedly “in cultivation.” This species or one or more of its varieties were named as parents in 35 hybrid combinations. The large-leaved European linden (T. platyphyllos) was also listed under T. grandifolia Ehrhart, T. rubra DC, and T. pseudorubra Schneider. This assemblage, which probably included some trees that we would consider as T. X europaea, was represented by 155 varieties (96 by Wagner), of which 51 were “cultivated,” and by inclusion in the parentage of 50 hybrids. Most of the hybrid epithets were also erected by Wagner. Obviously, we have had to be extremely conservative in our approach to Tilia.

With regard to hybrids, Jones (5) stated “about five times as many named hybrids have been reported as there are species of Tilia on the whole globe, nearly all from Hungary.” Most of these hybrids are spurious. There is no doubt that true interspecific hybrids can arise in nature and in cultivation, but they may not be as widespread as
suspected. Isolated trees of many species produce few viable seeds to self pollination. The presence of a tree of another somewhat compatible species in the vicinity may allow cross pollination to occur, resulting in a seed crop that may still show low germination, but a disproportionate number of hybrids.

*Tilia europaea* was named by Linnaeus, and it is a twist of fate that Linnaeus was "named" by a linden tree. As related by Jones (5), the father of Linnaeus, a pastor of peasant ancestry, in common with several of his relatives who had abandoned the farm life, changed his family name by "borrowing" from the common name for a tall linden (*T. X europaea*) that grew near his village. "Linden," or variations thereof, is the common name for *Tilia* species throughout most of Europe, and should be recognized as the "standard" common name for the genus. In American forestry practice, the name "basswood," corrupted from the "bast," or tough phloem fibers in the bark, is commonly used. In Great Britain, the word "lime," is merely another variation of lind or linden.

In all of the genera we have worked with in the past (8, and others), we have regarded the species as the "basic taxonomic unit," largely because of the ease of identification of the species and the fact that interspecific hybridization, especially in nature, was a rare occurrence. However, because of the apparent abundance of natural hybrids in *Tilia*, and the difficulties of taxonomic identification, the entire genus should be the "basic taxonomic unit" or "cultivar class." Thus, according to the Code (1), any cultivar name should be used only once within the genus. With the mandated usage of fancy, non-Latin cultivar names after January 1, 1959, this rule should be easily followed. However, it is often difficult to apply this rule to cultivar names used before 1959. In the listings below, the name 'Pendula,' has been used in 5 species, 'Fastigiata' and 'Pyramidalis' in 3 species each, and 'Aureovariegata,' 'Blechiana,' 'Nova,' and 'Rubra' in each of 2 species. We have, somewhat cautiously, selected only one cultivar with each of these names as being valid, based on priority, description, and lack of doubt as to species assignation.

In the listings that follow, the cultivars are discussed under their respective species or hybrid epithets in alphabetical order: *T. americana*, *T. cordata*, *T. X europaea*, *T. X flavescens*, *T. platyphyllos*, and *T. tomentosa*. At the end, there is a brief list of "other hybrids," that could not be reasonably placed in any other category. As noted above, *T. X europaea* L. is a natural hybrid between *T. cordata* and *T. platyphyllos*. We have also singled out *T. X flavescens* A. Braun (*T. americana* X *T. cordata*) since several cultivars, chiefly of Canadian origin, of this putative parentage are in the American nursery trade. The cultivars 'Blechiana' and 'Moltkei,' of dubious *T. americana* X *T. tomentosa* ("petiolaris") parentage are listed under *T. americana*, the putative parent they most resemble. The supposed hybrid between *T. americana* and *T. dasystyla* (*T. X euchlora* K. Koch — Crimean linden) has been grown as seedling stock in American and foreign nurseries, and some cultivars have been attributed to this hybrid. In Engler's monograph (2) the parentage of *T. X euchlora* was given as "*T. cordata* X *T. rubra* subsp. caucasica var. obliquifolia f. dasystyla," which may give some idea as to the complexity of identifying this taxon. Whatever the original *T. X euchlora* may have been, it is likely that some of the material now sold or grown under this name is far different. The cultivar 'Redmond,' once thought to be *T. X euchlora*, is treated under *T. americana*. Another cultivar of "euchlora" is listed with "other hybrids."

It is hoped that the following checklists will bring some order out of the chaos in *Tilia* and provide a more rational framework within which future cultivars may be placed. As in previous checklists, we have chosen, for emphasis, to give **VALID CULTIVAR** names in boldface capitals and **INVALID CULTIVAR** names in lightface capitals.

**T. americana**

**AMPELOPHYLLA.** (V. Engler, Monographie der Gattung *Tilia* Breslau, 1909, p. 140) — as *T. amelophylla*, with large leaves, irregularly toothed and lobed. We consider this well within the normal range of species variation. Listed as a cultivar by G. Krussmann, Handbuch der Laubholz-Benennung, 1960, p. 526, but probably never propagated and cultivated.

**AUREO-VARIEGATA** (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, Berlin, 1903, p. 338) — without description, but with synonym *Tilia*
americana argentea folis aureis-variegatis hort. There is a valid 'Aureo-Variegata' under T. cordata that has priority.

BIGLEAF (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 623) = LAXIFLORA, MACROPHYLLA, MISSISSIPPIENSIS.

BLECHIANA (L. Spath N. etc., Berlin, Cat. 1902-1903, p. 125) — as ab X americana? Suspected parentage changed in 1909-1910 Cat., p. 129 to (americana X tomentosa) on the basis of V. Engler's diagnosis in Monographie der Gattung Tilia, Breslau, 1909. As with 'Molktei,' the correct parentage is nearly impossible to determine, and it may simply be a T. americana variant.


MOLTKEI (L. Spath N. etc., Berlin, Cat. 1902-1903, p. 125) — as americana Moltkei (ab X americana?) L. Spath 1883/84, although it was not listed in their 1901-1902 Cat. Named for Fieldmarshals Count Moltke, and a tree was planted by Moltke in the nursery's arboretum in 1888. Putative parentage changed in 1909-1910 Cat., p. 130 to (americana X tomentosa) on the basis of V. Engler's diagnosis in Monographie der Gattung Tilia, Breslau, 1909. L. Dippel, Handbuch der Laubbäume 3, 1893, p. 73 made this earlier determination of ab X americana parentage and since T. ab Mchx. = T. heterophylla Vent., and we consider T. heterophylla Vent. as part of T. americana, the plant could be simply a T. americana selection. At any rate, the parentage is uncertain at best, and 'Moltkei' resembled T. americana more than T. tomentosa, especially in susceptibility to leaf-eating insects.


OBLONGATA (E. Petzold and G. Kirchner, Arboretum Musca- viense, Gottha, 1864, p. 159) — as Tilia a. densiflora, with compact cymes and umbonate fruits. Considered synonymous with T. americana.

Pendula (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 623) = AMPELOPHYLLA, DENTATA.

INCISO DENTATA (V. Engler, Monographie der Gattung Tilia, Breslau, 1909, p. 139-140) — in synonymy of both f. amelophylla and f. megalodonta, both of which are considered within the range of normal species variation.

LAXIFLORA (J.C. Loudon, Arboretum et Fruticetum Britannicum, Ed. 2, Vol. 1, 1844, p. 374) — as T. a. laxiflora, the loose-cymed-flowered American Lime Tree. Although plants bearing this name were then growing in the garden of the London Horticultural Society, they were probably grown from seed and the described "variety" was well within the normal range of variation for the species.

LAXIFLORA GIGANTEA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubbäume-Benennung, Berlin, 1903, p. 338) — without description, probably within the expected range of species variation.

LONGIDENTATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubbäume-Benennung, Berlin, 1903, p. 338) — as var. longidentata, equivalent to T. longifolia dentata. See DENTATA.


PRESTIGE (P.L.M. Van de Bom, DendrofloraNr. 19, 1982, p. 45-82) — as a new name for CONTINENTAL APPEAL, but originator did not change name.

PUBESCENS (J.C. Loudon, Arboretum et Fruticetum Britannicum, Ed. 2, Vol. 1, 1844, p. 374) — as T. a. pubescens, the pubescent-leaved American Lime Tree. Although plants bearing this name were then growing in the garden of the London Horticultural Society, they were probably grown from seed and the described "variety" was well within the normal range of variation for the species.

PUBESCENS LEPTOPHYLLA (J.C. Loudon, Arboretum et

Rubra (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, Berlin, 1903, p. 338) — without description. This may have not been properly identified as to species, and the ‘Rubra’ cultivar of T. platyphyllus has priority.

T. cordata


Bicentennial (Handy Nurs., Portland, Oregon, Wholesale Price List, Fall 1976-Spring 1977, p. 28) — with tight pyramidal form and small typical foliage. See also XP-110.

Bohlje (Joh. Bruns Nurs., Bad Zwischenahn, Germany, Cat. 1961-1962; p. 177) — as T. parvifolia (T. cordata) “Typ Bohlje,” upright growing with broad pyramid crown. Possibly originally selected at G.D. Bohlje Nurs., Oldenburg, Germany. Since the word “Typ” is not appropriate for inclusion in the cultivar name, we have made Bohlje the valid name. Later re-namings of this cultivar as “Erecta” and “Select” are invalid.


Erecta (H.J. Grootendorst, Dendroflora Nr. 7, 1970, p. 69-81) — as a cultivar from Lorberg, Germany with ‘Type Bohlje’ and ‘Select’ as synonyms. We have not seen the name ‘Erecta’ in print before 1959, and it would therefore be invalid if published after that date because it is in Latin form. We believe the name Bohlje has priority.


Glenleven (Sheridan Nurs. Ltd., Etobicoke, Ontario, Canada, Cat. 1963, p. 36) — fairly fast growing, with compact, almost pyramid head. A selection of the “Sheridan Hybrids.” Perhaps should be considered as a cultivar of T. flavescens.


Jimbo — Name found in records of Plant Sciences Data Center of the American Horticultural Society. Plant at Royal Botanic Garden, Hamilton, Ontario, Canada, obtained from Girard Nurs., Geneva, Ohio in 1971. This is PENDULA NANA from that nursery.


Olympic (J. Frank Schmidt & Son Co., Troutdale, Oregon, Wholesale Price List, Fall 1970-Spring 1971, p. 8) — without description. Described in Fall 1972-Spring 1973 List, p. 11, as being more symmetrical in growth and with better branching habit; leaves glossy.
PENDULA (E. Petzold and G. Kirchner, Arboretum Muscavienne, Gotha, 1864, p. 157) — as *Tilia ulmifolia pendula* Hort., with weeping branches; and synonym *T. europaea pendula* Hort. Not certain as to species designation.


PYRAMIDAL (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 623) = PYRAMIDALIS.

PYRAMIDALIS (W. Wittmack, Gartenfl. 45: 180, 1896) — as var. *pyramidalis*. The cultivar ‘Pyramidalis,’ under *T. platyphyllos*, has priority.


SELECT (Cole Nurs. Co., Painesville, Ohio, Trade List Fall 1964, p. 45) — as improved little-leaf linden, special budded strain. One of several selected clones that were tested at Cole Nurs. (of which ‘Chancellor’ was patented) and was considered good enough to designate with a name; but which was not propagated after all plants were sold. The Cole Nursery ‘Select’ cannot be placed in the synonymy of ‘Bohlje’ or ‘Erecta.’ However, there was a ‘Select’ listed in F.J. Grootendorst & Sons Nurs. Boskoop, Holland, Wholesale Price List, Fall-Spring, 1968-1969, p. 28, as very hardy, with brown branches. Grootendorst later (Dendroflora Nr. 7, 1970, p. 69-81) sunk his ‘Select’ in the synonymy of ‘Erecta,’ but both names are invalid. See ‘Bohlje.’

SHERIDAN HYBRIDS (Sheridan Nurs. Ldt., Etobicoke, Ontario, Canada, Cat. 1964, p. 33) — listed under *Tilia cordata*, and implying that several trees were involved, all of which had dense crowns, dark green foliage, and straight stems. Selected from seedlings grown from *T. cordata* trees that had been subject to cross pollination from *T. americana*. Of this group, ‘Glenleven’ has been named. Perhaps should be considered under hybrid epithet *T. × flavesceous*

STEWART (S.H. Davis and J.L. Peterson, J. Arboric. 6: 258-260, 1980) — without description, in an article on trunk decay. A selection was propagated under the name ‘Stewart’ by Princeton Nurs., Princeton, New Jersey, but was never described or advertised for sale, and the name must be considered invalid.

SWEDISH UPRIGHT (D. Wyman, Arnoldia 23: 111-118, 1963) — found by Alfred Rehder in Sweden in about 1906 and propagated at the Arnold Arboretum, Jamaica Plain, Massachusetts. Tight pyramidal form, with lateral branches at right angles to the trunk, with lower branches pendulous.

TURESI (Matt Tures Sons Nurs., Roselle, Illinois, Wholesale Price List, Fall 1968-Spring 1969, p. 11) — without description. Name invalid because of lack of description and because it is in Latin form after 1959.

**TYP BOHLJE = BOHLJE.**

XP 110 (E.H. Scanlon and Assoc., Olmsted Falls, Ohio, Wholesale List No. 15, Fall 1963-Spring 1964, p. 82) with narrow, conical tree form, acute branch angles. = BICENTENNIAL.

### T. × europaea

**T. cordata x T. platyphyllos**

**BICUSPIDATA** (E. Petzold and G. Kirchner, Arboretum Muscavienne, Gotha, 1864, p. 157) — as *T. vulgaris bicuspidata*, with bicuspidate leaves; obtained from a nursery.

**KAISERLINDSE —** a common name for PALLIDA in Germany.

**KONINGSLINDSE —** a common name for PALLIDA in The Netherlands.

**LONGVIRENS** (J. Timm & Co., Nurs., Elmshorn, West Germany, Cat. Fall 1949-Spring 1950, p. 42) — with oval crown, light green leaves, and greenish-yellow young branches. Cultivar had been tested for 20 years before 1949.

**PALELEAF** (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 623) = PALLIDA.

**PALLIDA —** According to G. Krussmann, Handbuch der Laubgehölz, Berlin, Ed. 1, Vol. 2, 1962, p. 527, this is an old selection based on *T. pallida* Simonkai. Twigs and buds strikingly red in autumn; leaves large, green above and yellowish green or bluish green below.


**WEEPING** (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 623) = PENDULA.


**ZWARTE LINDE —** Name used as a cultivar designation by H.J. Grootendorst, Dendroflora Nr. 7, 1970, p. 69-81, and earlier references, to denote a particular selection that had been long propagated in The Netherlands. Vigorous tree with nearly horizontal, very dark colored branches; very susceptible to aphid attack. The use of the common name for linden ("Linde") as part of a cultivar name is not recommended and "Zwarte" (dark) alone would be misleading. A new and valid name is needed for this cultivar.

### T. × flavesceous

**T. americana × T. cordata**

**DROPMORE** (Skinner’s Nursery, Ltd., Dropmore, Manitoba, Canada, Dropmore Hardy Plants For 1956, p. 19) — a hybrid between *T. cordata* and *T. americana*; upright, fast growing tree with large leaves that are immune to the mite that disfigures the native basswood.

**GLENLEVEN —** Probably hybrid of *T. cordata × T. americana*, described under *T. cordata*.

**SHERIDAN HYBRIDS —** Probably hybrids of *T. cordata × T. americana*; discussed under *T. cordata*.

**SPAETHII** (L. Spath Nurs., Berlin, Cat. 1912-1913, p. 134) — seedling origin at Spath Nurs. and considered to be a
hybrid between T. americana and T. cordata; fast growing, upright branches; dense rounded crown. The cultivar name should be spelled as above, without the umlaut over the "a" in Spatti, as used in the nursery name. The spelling with the "e" was deliberate and should be retained.


T. platyphylllos

ALBO-MARGINATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benzennung, Berlin, 1903, p. 339) — without description, as Tilia grandifolia albo-margnata van Houtte, implying that it was first cultivated in the nursery of L. van Houtte, Gand, Belgium.


AURANTIA (Royal Botanic Gardens, Kew Hand-List of Trees and Shrubs, Ed. 1, Pt. 1, 1894, p. 47) — without description; probably = AUREA.


AUREA NOVA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benzennung, Berlin, 1903, p. 339) — as Tilia grandifolia aurea nova hort. Masek., without description, but probably distinct from 'Aurea.'

BLECHIANA (Royal Botanic Gardens, Kew Hand-List of Trees and Shrubs, Ed. 1, Pt. 1, 1894, p. 47) — as T. platyphylllos var. blechiana Hort., without description. There may have been some confusion with the cultivar 'Blechiana' that we list under T. americana, and which has priority.


CORALLINA — Name first used to describe red-twigged variants occurring in the wild. W.J. Bean, Trees and Shrubs Hardy in the British Isles, Ed. 8, Vol. 4, 1980, considered the cultivar selection the same as RUBRA.


CUTLEAF (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 624) = 'Asplenifolia,' 'Filicifolia,' or 'Laciniata.'

DELFt — the cultivar name first appeared and the plant described in the Dutch magazine Groen, 1965, p. 4. The tree was selected in 1956 from a city planting in Delft, The Netherlands, and propagated by the Royal Nurseries Alphons Van Den Boom, Oudenbosch. The first trees were sold in 1965, but many had been distributed for testing before that time. Tree has a spire-shaped crown and holds its green leaves much longer than other cultivars.

DIMOND — Registered with the U.S. National Arboretum in 1982. Plant with dwarf growth habit, being only 1.1 m. tall at 12 years of age. Discovered in nursery in Moylinny, Muckamore, County Antrim, Northern Ireland by P.W.J. Dimond. To be published in an article by T.R. Dudley.

FASTIGIATA — A. Rehder, Manual of Cultivated Trees and Shrubs, Macmillan, Ed. 2, 1940, p. 623 erected this name as a forma based on Tilia grandifolia pyramidalis hort., and described it as having a narrow pyramidal habit. W.J. Bean, Trees and Shrubs Hardy in the British Isles, Ed. 8, Vol. 4, 1980, p. 608 used the name as a cultivar designation for a plant with steeply ascending branches, but based on Rehder's forma. Fastigate plants are not necessarily pyramidal, and we consider the nomenclatural transfers improper and PYRAMIDALIS to be the correct cultivar name. If any truly fastigate plants are propagated for cultivation, they should be given new cultivar names.

FILICIFOLIA NOVA (W.J. Bean, Trees and Shrubs Hardy in the British Isles, Ed. 7, Vol. 3, 1951) — as var. filicifolia nova, but considered a cultivar in Ed. 8, Vol. 4, 1980, p. 608. Leaves narrow-triangular, often irregularly lobed, but not as deeply as 'Laciniata' or Asplenifolia.'

FLACCIDA (E. Petzold and G. Kirchner, Arboretum Musacaviense, Goth, 1864, p. 155) — with flaccid leaves, as T. platyphylllos flaccida hort.; received from a nursery as T. europaea flaccida.

GOLDTWIG (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 624) = AURANfIA or AUREA.


MOYLINNY — Registered with the U.S. National Arboretum in 1982. Plant with dwarf growth habit, being 1.4 m. tall at 12 years of age. Discovered in nursery in Moylinny, Muckamore, County Antrim, Northern Ireland by P.W.J. Dimond. To be published in an article by T.R. Dudley.


608, considers that this may be a cultivar. Leaves obliquely truncate at base, glabrous beneath.


PSEUDOTURBINATA (Royal Nurseries Alphons Van Den Boom, Oudenbosch, The Netherlands, Cat. 1959-1960) — 'Pseudoturbinata' = 'Paul Kruger Linde'; = PAUL KRUGER.


PYRAMIDAL (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 624) = FASTIGIATA or PYRAMIDALIS.

PYRAMIDALIS (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 155) — of pyramidal growth habit.


REDTWIG (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 624) = CORALLINA or RUBRA.

RUBRA (R. Weston, Universal Botanist and Nurseryman, Vol. 1, London, 1770, p. 298) — as Tilia europaea rubra, the red-twigsed lime-tree. J.C. Loudon, Arboretum at Fruticetum Britannicum, Ed. 2, Vol. 1, 1844, p. 365-366, considered this as only a naturally-occurring variation, not purposely cultivated. According to W.J. Bean, Trees and Shrubs Hardy in the British Isles, Ed. 8, Vol. 4, 1980, the presently cultivated plants are propagated by grafting or layering and may represent an old nursery clone of unknown origin.


SULPHUREA (J.F. Cowell in L.H. Bailey, Cycl. Amer. Hort. 1902, Vol. 4, p. 1609) — probably the same as AUREA.


VINELEAF (H.P. Kelsey and W.A. Dayton, Standardized Plant Names, 1942, p. 624) = VITIFOLIA.


T. tomentosa

AUREO-VARIAGATA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, Berlin, 1903, p. 337) — without description. There is a valid 'Aureo-Variagata' under T. cordata that has priority.

BRABANT (H.J. Grootendorst, Dendroflora Nr. 7, 1970, p. 69-81) — large tree with dense, broad, conical crown; grows in almost every type of soil.

CALVESCENS (J. Timm Nur., Elmshorn, Germany, Cat. Fall 1937-Spring 1938, p. 57) — with light green leaves, tips of branches whitish.


ERECTA (H.A. Hesse Nur., Weener, West Germany, Cat. 1958/59, p. 208) — with upright single trunk.

FASTIGIATA (M.A. Dirr, Manual of Woody Landscape Plants, Ed. 3, 1983, p. 705) — "an upright clone, not too different from the species, especially with age." May = ERECTA.


KOOLWUJK (H.J. Grootendorst, Dendroflora Nr. 7, 1970, p. 69-81) — VAN KOOLWUJK.

NOVA (L. Beissner, E. Schelle, and H. Zabel, Handbuch der Laubholz-Benennung, Berlin, 1903, p. 337) — without description. There is a validly published and described cultivar 'Nova' in T. americana.

ORBICULARIS — According to W.J. Bean, Trees and Shrubs Hardy in the British Isles, Ed. 8, Vol. 4, 1980, p. 606-607, this cultivar originated in the nursery of Simon-Louis Freres, near Metz, France about 1868. The seed parent was probably T. tomentosa 'Pendula' (= "Petiolaris") and the male parent may have been T. x euchroma. Branches more pendulous than 'Pendula'; tree with a more conical crown.


PENDULA (E. Petzold and G. Kirchner, Arboretum Muscaviense, Gotha, 1864, p. 162) — as T. tomentosa pendula hort., with synonym T. tomentosa petiolaris. According to W.J. Bean, Trees and Shrubs Hardy in the
British Isles, Ed. 8, Vol. 4, 1980, p. 605-606, the tree had been received in Moscow perhaps from Booth Nurs. in Germany, under the erroneous name *T. americana pendula*. Petzold and Kirchner, in re-identifying this tree, confused it with *T. petiolaris* DC. De Candolle (Prodr. I, 1824, p. 514) originally described a specimen from a tree with longer-stalked leaves, in the Botanic Garden at Odessa. Since that time, the present tree of pendulous habit has been mistakenly listed under the name *T. petiolaris*. To avoid confusion with the plant described by De Candolle, this tree is best considered as the cultivar *PENDULA* belonging to *T. tomentosa*.


**PETIOLARIS** (J.C. Loudon, Arboretum et Fruticetum Britannicum, London, 1838, Ed. 1, Vol. 1, p. 373) — as the long-petioled-leaved Lime tree, a variety of *T. alba*. Based on *T. petiolaris* DC. Neither Loudon nor De Condolle ever mentioned that the tree had pendulous branches, but somehow the name “Petiolaris” has come to be associated with such a cultivar. See *PENDULA*.


**PYRAMIDALIS** (J.F. Cowell in L.H. Bailey, Cyc! Amer. Hort., 1902, Vol. 4, p. 1808) — as *T. alba var. pyramidalis* Hort., sunk in synonymy with the species.

**RHODOPETALA** (V. Gabor (or G. Varga?), Deutsche Baumschule 16: 303, 1965) — from Hungary. Flowers reddish-violet at tips, fading to yellowish at the base. Based on *T. tomentosa var. inequalis* f. rhodopetala Börbas.

**SZELESTE** (Ton van den Oever Nurs., Antwerp, Belgium, Computerized Cat. 1982-83) — without description.


**OTHER HYBRIDS**

**AUREA** (Girard Nurs., Geneva, Ohio, Cat. 1976, p. 30) — as *Tilia aurea* (Golden Linden), with growing habit similar to *euchlora* but with golden leaves — very rare. Doubtful as to species or hybrid identification.


**Literature Cited**