Nomenclatural Adjustments in the Yugoslavian Flora
II. Pteridophytes and Dicotyledons

Nomenklatorické a taxonomické změny v jugoslávské flóře
II. Pteridophyta a Dicotyledonae

Åskell Löve and Doris Löve


On basis of biosystematic investigations mainly on the flora of Slovenia (Yugoslavia), three new families are named: Thalictraceae, Coptaceae and Saniculaceae. One new generic name is validated: Cernohorskya, for a former section of Arenaria. Four older generic names are resurrected: Alsine L., Caulopsis FOURR., Somerauera Hoppe and Trochocephalus (MERT. et KOCH) OPIZ. In addition, ninety eight new combinations and emendations at the species and lower levels are validated for the genera Asplenium, Cernohorskya, Somerauera, Alsine, Papaver, Biscutella, Caulopsis, Rubus, Geum, Alchemilla, Vicia, Rhodax, Trochocephalus, Colymbada, Jacea and Stenactis.

Institute of Arctic and Alpine Research, University of Colorado, Boulder, Colorado 80302, USA.

When the biological species concept and the evolutionary concept of genera and higher categories are applied to the classification of plants of a flora region not so studied previously, it is to be expected that some adjustments in classification will be required, followed by some changes in nomenclature of the taxa concerned. These changes will either require lumping of taxa that have been too narrowly defined by authors of manuals, or their splitting into less comprehensive units, and frequently it may be found necessary to move some taxa between genera or even families.

While investigating the cytotaxonomical composition of the Yugoslavian flora, with a particular emphasis on the plants of Slovenia as the first step (Löve, Löve et Šušnik 1974a), we have compiled and computerized a floristic checklist and chromosome number atlas of the Slovenian flora, which is available from the authors as a printout at cost price but kept by them on a computer tape and a card index (Löve et Löve 1974b). The advantage of such a tape and printout as compared with the printed book lies in the fact that it can be updated annually either in its entirety or by aid of printouts of additions and changes, at the same time as the tape simplifies various kinds of studies of the flora and its composition by aid of the computer; but when the study has ended, the material can be easily printed in book form. The taxonomical and chorological part of this compilation is based on available recent floras and flora lists including the area (MAYER 1952, Martinčič et Šušnik 1969, Janchen 1956—1967, Tutin et al. 1964—1972, Ehrendorfer et al. 1967, Hess, Landolt et Hirzel 1967—1972) and other taxonomical information on the plants in question. The extensive cytological data, however, were gathered from all kinds of publications that were located especially by aid of the chromosome lists by Tischler (1915, 1927, 1931, 1935,
1936, 1938, 1950), Gaiser (1926, 1930a, b, 1933), Løve et Løve (1942, 1948, 1961b), Delay (1951), Darlington et Janaki-Ammal (1945), Darlington et Wylie (1955), Cave et al. (1958—1965), Ornduff et al. (1966—1969), Moore et al. (1970—1973), and by an extensive card register of chromosome numbers and a reprint collection compiled by us during the past three decades. A special effort has been made to arrive at a uniform classification of different groups based on the cytological and morphological-chorological data as evaluated on basis of the evolutionary concepts which are thoroughly discussed by Mayr (1942, 1963, 1970), Løve A. (1964, 1965), Løve et Løve (1961b, 1974a), Løve, Løve et Kapoor (1971), and Løve, Løve et Sušnik (1974a). Therefore, we regard as varieties closely related and interfertile populations, which differ in minor morphological characters as compared to the species to which they belong and occupy relatively small areas which may or may not be geographically or ecologically isolated, whereas the subspecies differ from the variety by comprising it and by occupying relatively large areas which are partially or completely isolated geographically or ecologically or both. Varieties and subspecies are potentially capable of interbreeding without appreciable reduction in fertility; they are respectively minor and major geographical races corresponding to the minor and major races of the human species. For apomictic populations, which partially or completely lack the sexual process, we advocate the modification of this system proposed by Løve A. (1960), in which the special categories agamovariety and agamospecies replace the variety and subspecies of the sexual species, although we are aware of that these groups may not be biologically equivalent. The species category, however, is defined by its inability of real interbreeding with other such taxa because of internal hereditary barriers or because of their lack of even potential miscibility. The natural genus, in our opinion, is an important evolutionary cluster of related species which have evolved by linear branching from a generic prototype and are therefore characterized by a single basic chromosome number and the same chromosome morphology and by incompatibility towards other such clusters; it follows that dysploid changes in basic number, or drastic changes in the morphology of the chromosomes in whatever way these may have been produced, are indicative of generic status and not of the category of subgenus, since we regard that group only as a convenient morphological subdivision of a large genus and not necessarily as an incipient generic evolution. Morphological distinctions must, of course, be used for the identification of populations at any level of classification, and strict adherence to the Code of nomenclature secures that their names can be established as exactly as possible.

As could be expected from previous studies of a similar kind, only a few of the several thousand taxa included in the Slovenian atlas were found to be in need of some nomenclatural rearrangement as compared to recent floristic publications from the area, although several taxa were shown to require some redefinition for which names not commonly used for this flora could be reestablished. Some adjustments for the monocotyledons have already been proposed by Løve, Løve et Sušnik (1974b), whereas those needed for the pteridophytes and dicotyledons are validated in the present paper. It must be mentioned that several other changes in classification are indicated in the atlas, but they must wait until more investigations have confirmed our suspicions. Also, this paper includes some changes of the
nomenclature of related taxa from other regions because we found it convenient to mention them at this time rather than to publish them separately.

Some of the observations here reported have been made as a part of a cooperative program on the cytotaxonomy of the Yugoslavian flora, supported during two summers by a Foreign Currency Grant from the Smithsonian Institution in Washington, D.C.

Asplenium

Since the rare Alpique diploid of the *A. ruta-muraria* complex described by Lovis et Reichstein (1964) certainly is reproductively isolated from the common tetraploid species simply because of the difference in chromosome number, a subspecific status for it is hardly logical from the point of view of evolutionary concepts. Also, it has recently been shown, by Bouharmont (1972), who studied the meiosis of triploid hybrids and of an autotetraploid induced by apospory, that the tetraploid *A. ruta-muraria* has not been formed by a simple chromosome doubling of the diploid *dolomiticum*, although he concludes that the former could be an autotetraploid derived from intraspecific hybridization, or, in the terminology of Löve et Löve (1949), an hemiautotetraploid, a phenomenon very common among natural polyploids (Löve et Löve 1949, 1971, Löve Å. 1964). Because the diploid and polyploid are identifiable by aid of macroscopic and microscopic methods and occupy ecologically and geographically somewhat distinct areas, it is but logical that the former be accepted also as a species in its own right; its new status is then:


Although Lovis (1955) concluded that the diploid and tetraploid taxa then known from within the *Asplenium trichomanes* complex "display the fundamental characteristics of two distinct natural species", no typification of the Linnaean species or naming of the other were proposed. When Meyer (1962) gave names to the two taxa, he selected to call them subsp. *bivalens* and subsp. *quadrivalens*, also without typification. In connection with the preparation of the critical flora by Rothmaler (1963), the first proofs, which were widely circulated privately (cf. Lovis 1964), included these two subspecies under the new names subsp. *trichomanes* and subsp. *lovisi*, but through influence from the present writers, these were changed in the printed book to the species names *A. trichomanes* and *A. lovisii*, the former being typified by the diploid taxon, because Rothmaler, as expressed in letters to us, correctly assumed that this was the plant best known by Linnaeus; the latter species was never described because of the untimely death of the author. Later, Fuchs (1963) reversed this typification and gave the name *A. trichomaniforme* to the diploid, but since this was a later homonym, Soó (1963) replaced this name with the epithet *A. linnaei*, adding the explanatory comment "(*A. trichomanes* auct. p. p. non L. herb.)." Lovis (1964) accepted the typification proposed by Rothmaler (1963) and rejected those by Fuchs (1963) and Soó (1963) on basis of the certainly correct remark by Stearn (1961), with reference to the Linnaean herbarium, that "... the specimens present cannot always be accepted as nomenclatural types; indeed it would be highly misleading to accept uncritically a certain specimen in the Linnaean
Herbarium as a type...". Lovis (1964) also felt, quite reasonably, that since the diploid plant is common in Scandinavia and was likely better known to LINNAEUS than the tetraploid, which he also included in his species by reference to publications from more southern lands, this would be a strong support for accepting the diploid as the type for the Linnaean species, as thought also Rothmaler.

Although Lovis (1964) included as a synonym of A. trichomanes the species A. melanocaulon Willd., the holotype of which he found to be unequivocally diploid, he apparently overlooked the fact, that when Willdenow (1809) described this species, he left the now restricted Linnaean species as being identical with the more southern taxon, which he himself knew better, and thus automatically typified A. trichomanes with the tetraploid, as did Fuchs (1963) and Soó (1963). According to the Code, therefore, the name A. trichomanes L. must be retained for the tetraploid subsp. quadrivalens, whereas the subsp. bivalens is identical with A. melanocaulon, contrary to the reasoning of Lovis (1964).

It is a logical consequence of this typification, that the more recently discovered diploid subsp. inexpectans described as a race of A. trichomanes by Lovis (1964) be transferred to the other species:


It ought to be mentioned that the northern diploid subsp. melanocaulon is known as a fairly uniform taxon occurring only or at least mainly on non-calcareous rocks, whereas the more southern diploid subsp. inexpectans seems to be a variable plant of limestone rocks. No available evidence indicates that these two subspecies would not be completely interfertile. It is, however, conceivable that the widely distributed tetraploid A. trichomanes s. str. might owe its great success to having been formed as an hemiautoploid (cf. Löve et Löve 1949) from hybrids between these conspecific subspecies.

Cernohorskya

It is evident from morphological and cytological observations of the genus Arenaria L. as circumscribed and subdivided by McNeill (1962), that all the subgenera accepted by him are assemblages which might be more correctly regarded as genera in their own right, as previously proposed by other authors. However, even within his subgenus Arenaria, which he divides into several sections and series, there is a considerable heterogeneity, at least some of which is not only morphologically but also evolutionarily conditioned as shown by differences in basic chromosome number and chromosome morphology.

In the case of the section Grandiflorae McNeill it is claimed by McNeill (1962) that it is closely related to his section Rariflorae. It is not apparent on what morphological grounds this is based, but the fact that the species cytologically known from the latter section are characterized by the basic number x = 10, which also is typical of Arenaria s. str., whereas the section Grandiflorae has x = 11, reduces considerably the significance of this claim. In order to lessen the heterogeneity of the genus Arenaria caused by the inclusion in it of the section Grandiflorae, we propose that the latter be separated from it under the new generic name:

126

The type species of the genus is Cernohorskya grandiflora (L.) Löve et Löve.

The generic name is selected in honor of Professor Zdeněk Černohorský of Praha, an ardent student of Central European and Icelandic phytogeography and taxonomy and one of the outstanding specialists in plant anatomy and lichenology.

The new genus comprises two complexes, distributed in southwestern and Central Europe and in the eastern Mediterranean. Although it is possible that cytogenetical and taxonomical experiments may later show that they are better grouped as subspecies of two biological species only, our present knowledge indicates that they are correctly classified as independent species for which we propose the following new combinations:


Cernohorskya bourgaeana (Coss.) Löve et Löve, comb. nova. — Bas.: Arenaria bourgaeana COSSON ex WILLEKOMM, LINNIAEUS 40 : 117, 1876.

Cernohorskya incrassata (Lge.) Löve et Löve, comb. nova. — Bas.: Arenaria incrassata LANGE, Pl. Nov. HISP. 1 : 3, Tab. 4, Fig. 2, 1864.

Cernohorskya kotschyana (Fenzl) Löve et Löve, comb. nova. — Bas.: Arenaria kotschyana FENZL, RUSSEGGER, REISE 2 : 930, 1843.

Cernohorskya tmolea (Boiss.) Löve et Löve, comb. nova. — Bas.: Arenaria tmolea BOISSIER, Diagn., Ser. 1, 8, p. 101, 1842.

Cernohorskya triflora (L.) Löve et Löve, comb. nova. — Bas.: Arenaria triflora LINNAEUS, Mantissa, p. 240, 1771.

Only the first-mentioned species is met with in Slovenia.

Somerauera

The genus Somerauera HOPPE, as understood by the present authors, is characterized by the basic chromosome number \( x = 9 \), in addition to very distinctive morphology, and comprises the series Grigneensis MATTF., Aretioideae (Fenzl) MATTF., Lanceolatae, and Dianthifoliae MATTF. of the section Lanceolatae (Fenzl) GRAEBNER of the subgenus Minuartia of the genus Minuartia as modified by McNeill (1962). The strict subgenus Minuartia is characterized by the basic numbers \( x = 12 \) and 13. The type of the genus Somerauera is \( S. arctioides \) HOPPE, or, since this name is invalid because it was not accepted by its author (cf. BECHERER 1956),

Somerauera arctioides (HOPPE) Löve et Löve, comb. nova. — Bas.: Siebera arctioides HOPPE, Flora 2 : 24, 1819.

Other species included in the genus are:


Somerauera cerastiifolia (RAM.) Löve et Löve, comb. nova. — Bas.: Arenaria cerastiifolia RAMOND in LAMARCK et DE Candolle, FL. Franq. 4 : 783, 1805.

Somerauera dianthifolia (BOISS.) Löve et Löve, comb. nova. — Bas.: Alsine dianthifolia BOISSIER, DIAGN., SER. 1, 8, p. 101, 1842.


Somerauera pestalozzae (BOISS.) Löve et Löve, comb. nova. — Bas.: Alsine pestalozzae BOISSIER, DIAGN., SER. 1, 8, p. 99, 1849.

Somerauera rupestris (SCOP.) Löve et Löve, comb. nova. — Bas.: Stellaria rupestris SCOPOLI, FL. CARN., ED. 2, 1 : 317, TAB. 18, FIG. 1, 1772.

In Slovenia, the genus is represented only by \( S. arctioides \) and \( S. rupestris \), the latter being originally described from this region.
Alsine

As pointed out by McNeill (1962), the generic name Alsine L. must fall into disuse as being confused so long as Stellaria media (L.) Vill. is regarded as congeneric with S. holostea L., which is the type species of Stellaria L. Since S. media, or Alsine media L., the type species of Alsine L. s. str., however, undoubtedly is misplaced in the genus Stellaria, morphologically and, especially, cytologically with its basic chromosome number \( x = 10 \) or 11, as compared with \( x = 13 \) of Stellaria s. str., we find it wise to resuscitate the Linnaean genus Alsine in its strict meaning and include in it the type species and its close relatives. The only nomenclatural change necessary for the species of the flora of Slovenia is the following transfer:


A similarly well founded division of the related genus Cerastium has been proposed on purely morphological grounds by Reichenbach (1841, cf. Konnikov 1973), separating the genus Dichodon (Bartl.) Reichb. to accommodate the species *C. cerastoides* and its relatives with the basic chromosome number \( x = 19 \) as contrasted to Cerastium s. str. which so restricted includes only species with the basic number \( x = 9 \). The same conclusion was reached by Boivin (1966) who proposed for this taxon the generic name Provencheria, unaware of Reichenbach's older name.

**Thalictraceae and Coptaceae**

Much recent evidence from embryology and chemotaxonomy apparently supports the proposal by Langlet (1932) and Gregory (1941) for the division of the collective Ranunculaceae into smaller but evolutionarily more distinct groups at the higher levels. Since we feel it is insufficient to distinguish only the Paeoniaceae and Helleboraceae from the traditional Ranunculaceae, we propose that two more families be recognized on basis of their morphological and cytological differences which clearly set them apart evolutionarily from each other and from other groups of the collective family. For these families we propose the following new names:


The latter family is not met with in Europe, but includes only the small American-Asiatic genus *Coptis* and the monotypic eastern North American genus *Zanthorrhiza*, whereas in the European area the family Thalictraceae comprises the genera Anemonella, Aquilegia, Isopyrum, and Thalictrum.

**Papaver**

We regard it as wise to keep the species *Papaver alpinum* L. in a sense wide enough to accommodate, at subspecific and varietal levels, all the diploid taxa
of the southern Eurasian mountains and the *P. pygmaeum* RyDB., since they are apparently somewhat geographically and ecologically isolated races only of the same widespread but interfertile gene pool (cf. Löve D. 1969, Meusel et al. 1965), as are also the octoploids and decaploids of the arctic gene pools of the complex (cf. Löve A. 1962, Knaben et Hylander 1970). Some of these diploid taxa are obviously major geographical races and thus ought to be accepted as subspecies, within which have developed some minor or local races, which are to be given varietal names only. That seems to be the case with the taxon of the Julian Alps and the northern Apennines (Mayer 1960), which we name:


**Biscutella**

It is our opinion that the so-called *Biscutella laevigata* L. complex, which Machatschki-Laurich (1926) and Guinea et Heywood (1964) regarded as a series of subspecies and varieties of a single species is more correctly classified as a tetraploid species and a diploid species, each including some morphologically and geographically distinguishable and interfertile subspecies and varieties. The tetraploid complex is identical with the Linnaean species *B. laevigata* s. str. and its entire variability seems to be classifiable as the two subspecies *laevigata* and *lucida* (DC.) Mach.-Laur. The oldest valid specific name for the diploid complex, however, is apparently *B. longifolia* Vill., since this taxon has recently been found to be diploid (Delay 1971), so it was obviously a mistake when Guinea et Heywood (1964) regarded that taxon to be synonymous with the tetraploid subsp. *laevigata*. At least twelve subspecies are required to accommodate the morphologically and geographically recognizable races of the diploid group, i.e. subsp. *longifolia* and the following:


*Biscutella longifolia* Vill. subsp. *subaphylla* (Mach.-Laur.) Löve et Löve, comb. nova. — Bas.:

Biscutella longifolia VILL. subsp. tenuifolia (BLUFF et FINGERH.) LöVE et LöVE, comb. nova. — Bas.: Biscutella ambigua DC. & B. tenuifolia BLUFF et FINGERH., Comp. Fl. Germ. 2 : 43, 1825; Biscutella laevigata L. subsp. tenuifolia (BLUFF et FINGERH.) MACH.-LAUR.


Biscutella longifolia VILL. subsp. varia (DUM.) LöVE et LöVE, comb. nova. — Bas.: Biscutella varia DUMORTIER, Fl. Belg., p. 118, 1827; Biscutella laevigata L. subsp. varia (DUM.) ROUY et FOUC.

Only four of these taxa are known to occur in Slovenia, i.e. B. laevigata subsp. laevigata, B. longifolia subsp. angustifolia, B. longifolia subsp. gracilis, and B. longifolia subsp. tirolensis. Caulespia

Since the taxon commonly named either Turritis pauciflora Grimm or Arabis pauciflora (GRIMM) GÄRCKE is known to be characterized by the basic chromosome number x = 7, its inclusion in either Arabis s. str. (x = 8) or Turritis s. str. (x = 6) is clearly out of step with evolutionary classification, at the same time as it is well distinguished from both genera. We propose the resuscitation of the generic name Caulopsis FOURR. as described by FOURREAU (1869) to accommodate this species, and thus avoid to add heterogeneity to either of the other two genera. In that genus the name of this taxon should be:


Rubus

Following the categorization proposed by LöVE Á. (1960), the Slovenian taxa of the apomictic complexes of Rubus fruticosus L. need to be validated as agamospecies and agamovarieties. We want to emphasize that although some authors may prefer to regard these categories as equivalent to sexual subspecies and varieties, they are probably not comparable, for various reasons.

Rubus fruticosus L. agsp. bifrons (VEST) LöVE et LöVE, stat. nov. et comb. nova. — Bas.: Rubus bifrons VEST ex TRATTINICK, Rosae. Monogr. 3 : 28, 1823.


Rubus fruticosus L. agsp. discolor (WEIHE et NEEES) LöVE et LöVE, stat. nov. et comb. nova. — Bas.: Rubus discolor WEIHE et NEEES, Rubi Germ., p. 30, 1824.


Rubus fruticosus L. agsp. macrophyllus (WEIHE et NEEES) LöVE et LöVE, stat. nov. et comb. nova. — Bas.: Rubus macrophyllus WEIHE et NEEES, Rubi Germ., p. 35, 1824.
Rubus fruticosus L. agsp. suberectus (ANDERSS.) LöVE et LöVE, stat. nov. et comb. nova. — Bas.: Rubus suberectus ANDERSS. in Smith, Trans. Linn. Soc. 11 : 218, 1815.


Rubus fruticosus L. agsp. villicaulis (KOEHLER) Love et Love, stat. nov. et comb. nova. — Bas.: Rubus villicaulis KOEHLER ex WEIHF. et NEES, Rubi Germ., p. 30, 1824.

Geum

Since numerous genetical experiments support the observations of earlier taxonomists as to the easiness with which the hexaploid taxa Geum rivale L. and Geum urbanum L. hybridize to form completely fertile swarms of intermediates, there remains no logical reason to keep them as separate species. Their case is similar to that of Silene vulgaris and S. marilimum (cf. Löve et Löve 1961a, b) and of the dioecious Melandrium (cf. Löve D. 1944), and, still more, to that of the main human races which differ in hundreds of characters and were originally also formed through selection by geographical or ecological separation which does not necessarily create reproductive isolation. It is possible and indeed likely, that some other hexaploid taxa of the genus Geum will also be found to belong to this complex gene pool and to have been classified at a too high level; however, since experimental evidence still is lacking for other than these two main taxa, a reduction of others to a lower rank may be postponed.


Alchemilla

As in the case of the agamospermous microspecies of Rubus, the similar but certainly much older and more stabilized taxa of Alchemilla L. are better regarded as agamospecies of a few distinct complexes which seem to be morphologically definable in a way similar to sexual biological species. In many cases, these taxa have already been given a subspecific status, which we then find convenient to transfer to the agamospecific status without a change in authorship, whereas a few such taxa from Slovenia still need to be validated in this category.

In this connection we would like to mention that we refrain from trying to classify the numerous microspecies of Hieracium, Pilosella, Ranunculus sect. Atricomi, and Taraxacum into a similar system, mainly because it is our impression that their great majority is made up of more or less ephemeral and recent agamohybrids, which may or may not stabilize by aid of natural selection.


Alchemilla hispida L. emend. MILL. agsp. exigua (BUSER) LÖVE et LÖVE, stat. nov. et comb. nova. — Bas.: Alchemilla exigua BUSER ex PAULIN, Jahresber. Staatsgymn. Laibach 1907 : 11, 1907.


Alchemilla vulgaris L. agsp. tirilensis (BUSER) LÖVE et LÖVE, stat. nov. et comb. nova. — Bas.: Alchemilla tirilensis BUSER ex DALLA TORRE et SARNTHEIN, Fl. Tirol 6, 2 : 536, 1909.

Vicia

The species Vicia oreophila of the Vicia cracca complex, which was described by ŽERTOVÁ (1962), is a typical mountain race, which is most correctly regarded as a subspecies only of the tetraploid lowland species, as is evident from the more recent study by CHRTKOVÁ-ŽERTOVÁ (1973). As such we name it:


The diploid taxa, frequently reported under the name Vicia cracca, apparently belong to another biological species, one of the lowland races of which is identical with V. kitaibeliana REICHENB. It is possible that some other names may later have been applied to other diploid races of this complex, but since all such taxa are very likely to belong to the same diploid biological species, it is in conformity with the Code to widen the limit of the species that was originally described as restricted to the Pannonian lowland so that it will include also other lowland diploids and the diploid montane race mentioned without name by CHRTKOVÁ-ŽERTOVÁ (1973); for these races valid names at the subspecific and varietal levels are likely to be available.

Rhodax

Although we agree with HOLUB (1970) in separating the genus Rhodax SPACH from Helianthemum MILL. (cf. also LÖVE et KJELQUIST 1964), our concepts of species in this group seem to differ somewhat. Therefore the need for the following new combinations:

Rhodax italicus (L.) HOLUB subsp. alpestris (JACQ.) LÖVE et LÖVE, comb. nova. — Bas.: Cistus alpestris JACQUIN, Enum. Stirp. Vindob., p. 93, 1762.


Saniculaceae

The subfamilies of the traditional Umbelliferae described by DRUDE (1899) are entities of equal and considerable distinction, that may even be less closely related than indicated by previous classifications. They are not only morphologically, anatomically, and chemically distinct, but still more so cytologically as shown by chromosome size and form and basic numbers. We find it illogical to separate only one of the groups from the family at that level, as was done for Hydrocotylaceae by HYLANDER (1945). Therefore, LÖVE et LÖVE (1961b and later) have recognized the groups Apiaceae, Hydrocotyl-
laceae and Saniculaceae as families in their own right, without a formal validation of the last one until now:

Saniculaceae Löve et Löve, based on Umbelliferae subfam. Saniculoideae Drude in Pflanzenfam. 3, 8 : 135, 1898. Type genus Sanicula L.

Trochocephalus

The genus Scabiosa L. as traditionally delimited (Coulter 1824) includes the three sections Scabiosa (= Sclerostemma Koch), Vidua Coult., and Asterocephalus Coult., but Bobrov (1957) added the section Prismakena Bobr. for mainly recently described species from eastern Asia. The two first and two last sections are morphologically very distinct, both in vegetative and flower characteristics (Ehrendorfer 1964a, b); hybrids are known between species within each two of these sectional pairs, whereas no reports are known of hybrids between Scabiosa and Vidua on the one hand and Asterocephalus and Prismakena on the other. This fact has found its explanation in the observation that whereas the basic chromosome number of the two first-mentioned sections is \( x = 8 \), it is \( x = 9 \) in the two latter ones.

From the evolutionary points of view, it is evident that only the sections Scabiosa and Vidua ought to remain in the genus Scabiosa in its restricted sense, whereas the almost two scores of taxa of the other two sections should constitute a genus in its own right. For such a restricted genus the name Asterocephalus has been proposed (Lagasca 1816), but since the typification of the oldest usage of that name at that level, by Zinn (1757), apparently renders it fully synonymous with Scabiosa L. s. str. (Dandy 1967), this name is not available at the generic level.

The only valid generic name seems to be Trochocephalus (Mert. et Koch) Opiz, as published by Opiz in Berchtold et Opiz, Ökon. — Techn. Fl. Böhmens 2/1, p. 222—223, 1838 (cf. Pouzar 1964), which was based on Scabiosa Rotte Trochocephalus Mert. et Koch, in J. C. Röhl, Deutchlands Flora, p. 756, 1823. Its type species is T. graminifolius (L.) Opiz, which is based on Scabiosa graminifolia L. No other species has been transferred to this genus, but other taxa which seem to belong to it are:

- subgenus Trochocephalus (= Scabiosa sect. Asterocephalus Coult.)
  - Trochocephalus candolii (Wall.) Löve et Löve, comb. nova. — Bas.: Scabiosa candolii Wallich in Decandolle, Prod. 4 : 654, 1830.
  - Trochocephalus gumbeticus (Boiss.) Löve et Löve, comb. nova. — Bas.: Scabiosa gumbetica Boissier, Fl. Orient, 3 : 137, 1875.
The following are names of Slovenian plants needing validation when the collective genus *Centaura* is divided into more natural genera, as advocated by several recent authors (cf. Holub 1972, 1973).
Colymbada dichroanthera (Kerner) Holub subsp. alpigena (Paulin) Löve et Löve, stat. nov. et comb. nova. — Bas.: Centaurea alpigena Paulin, Carniola, Ser. N., 8 : 104, 1917.


Jacea pratensis Lam. subsp. gaudinii (Boiss.) Löve et Löve, comb. nova. — Bas.: Centaurea gaudinii Boissier in Boissier et Reuter, Diagn. 2, 3, p. 70, 1842.


**Stenactis**

When the collective genus *Erigeron* L. is divided into more natural genera as proposed by Cronquist (1947), the genus *Stenactis* Cass. comprises the annual North American weeds which have become widely introduced into Europe. We agree with Wagenitz (1964) that the two triploid apomicts frequently distinguished as the varieties or subspecies *strigosa* and *septentrionalis* of the species *E. strigosa* (Muehlenbr.) DC. are better placed as two equivalent subspecies of the also obligately apomictic triploid complex *S. annua* (L.) Nees. Only the subsp. *septentrionalis* seems to occur in Slovenia:


**Souhrn**


**References**


LAGASCA M. (1816): Genera et species plantarum, quae aut novae sunt aut nondum recte cognoscuntur. — Matriti.


Hejný S., V. Jehlík, K. Kopecký, Z. Kropáč et M. Lhotská:

Karantenní plevele Československa


Práce je rozdělena do pěti základních částí: Úvod, obecná část, speciální část, literatura a rejstřík jmen rostlin. Opu publikace tvoří obecná a speciální část.

V obsáhlé obecné části jsou v dostatečné širí a přehledně řešeny nejprve metody výzkumu. Kolektiv našich předních odborníků zde dále osvětluje proces přizpůsobování adventivních druhů, většinou si různých forem tendence rozšiřování druhů na nových stanovištích, vysvětluje způsoby zaznamenávání údajů o rozšíření do map a uzavírá tuto teoreticky i metodicky cennou stáři erudováným návodom na syntetické zpracování dat o adventivním druhu a prognóze jeho šíření. Obecná část pokrátce hodnocením dosavadního stavu výzkumu v ČSSR, většinou si problematiky zahraničních osiv, dopravních užlů a komunikační sítě jako možných ohnisek šíření adventivních druhů.

V dalším oddílu této části autoři věnují pozornost speciálním substrátům (olejiny, vlna, bavlna, jižní ovoce, rudíško, skládky, jatky a čisté stanice osiv). Ke každému speciálnímu okrhu problémů uvádějí nejen aktuální příklady z ČSSR, ale i doporučení k omezení a likvidaci druhu. Obecná část je uzavřena charakteristikou cest karantenních druhů na naše území a současně platných karantenních opatření v ČSSR, se zdůvodněným seznamem druhů, které by měly být v ČSSR nově zařazeny do seznamu druhů vnější a vnitřní karantény.

Speciální část jedná o 28 druzích karantenních plevek. O jednotlivých druzích jsou předkládány tyto informace: stručný popis, původní rozšíření, rozšíření v ČSSR, ekologická charakteristika, způsoby omezování a perokresba druhu, doplněná většinou o diagnostické důležité detaily (pouze u Chenopodium missourienne AELLEN perokresba chybí). Speciální část zahrnuje přibližně čtyři a bibliranci adventivní druhy — karantenní plevele — a umožňuje mu vhodnou orientaci pro studium v jakékoli části území ČSSR. V této části se měl autor podle mého názoru, i když si uvědomuji obtížnost tohoto úkolu, vypořádat s bližší charakteristikou Chenopodium missourienne AELLEN. Je možné namítat, že speciální literatura poskytuje o diagnostice tohoto druhu potřebné informace, ale bude mít možnost každý zemědělský odborník či florista z příslušné literatury čerpát? Je to úkol, který bude třeba, projeví-li se u nás v budouceni Chenopodium missourienne jako akutní karantenní druh, řešit. Aspoň grafický pokus, který by znázornil typické znaky Ch. missourienne proti Ch. album L., by byl velmi dobrý a snad by částečně pomohl třeba pouze v podezření, že naleznetý exemplář by mohl být Ch. missourienne. Snad by po přeuročení takový materiál pomohl k zjištění dalších lokalit tohoto druhu v ČSSR.

Publikace vyplňuje dosud citelnou mezeru v literatuře o této problematice u nás. Za velmi cenný vztahují fakt, že je rekoncenzované diferen klasickej ukázkové, jak může přímo základní výzkum pomoci výrobni odvětví. Stále stopují význam botaniky antropofyt s. l. činí z této studie jednu ze základních příruček, po níž by měli sáhnout všechni ti, kteří se jakkoliv dostávají do styku se studiem výběrové antropické ovlivňovaných stanovištích.

A. Pyšek