*Acta Botanica Academiae Scientiarum Hungaricae, Tomus 19 (1—4), pp. 73—79 (1973)*

# PRELIMINARY NOTES ON THE SUBTRIBE CENTAUREINAE

By

J. DOSTÁL

PRAHA

(Received: January 1, 1973)

The present paper deals with the taxonomy of the subtribe *Centaureinae* (fam. *Asteraceae*): the author divided this subtribus into 51 genera. The types and some other data of these genera are added.

The taxonomy of the subtribe *Centaureinae* is made difficult by the relative uniformity of the floral characters and by variability of the vegetative organs. The main guide for the systematic arrangement of the genera is the presence of assumed primitive characters in the oldest taxa, e. g. suffruticulous, woody at the base, leaves not divided, not decurrent, heads great, bracts large, relatively thick at base, with indistinct, not divided appendages, florets relatively large, corollas 5-fide, achens large, each with a paleaceous pappus. The delimination of genera is also very difficult and dependent on the opinion of the taxonomist, because to elect a certain group of characters for a delimitation of genera from the set of all taxonomic important characters of species of this subtribus is almost impossible. With regard to the geographical areas, to the evolution, to the trends of variability, to the karyotypes, to the homogenity and also to the complex of morphological as well as anatomical characters respectively, the following distribution of the subtribus in small genera is presented.

I have used the morphology of pollen grains as a basis for the inner taxonomy of the subtribus, because WAGENITZ (1955) has discovered a very interesting and important feature, i. e. that there are 7 main forms of pollen grains, which are in close relation to the evolution, morphology, as well as to the karyotype and phytogeography of the groups concerned. I have classified groups of indentical pollen grain-type according to the morphology of fruits (as has been elaborated by DITTRICH) and of the involucral bracts and their appendages, as well as according to the habits of plants. The total habitus is a very important character, its evolution is in accordance with the evolutionary morphology of the different organs.

*Asteraceae* — tribus *Cardueae* Melchior in Engl. Syl., Pfl.-Fam., ed 12, 2: 494 (1964). — Typ.: *Carduus* L. — Subtribus *Centaureinae* Hoffm. in Engl. et Prantl Nat. Pfl.-Fam. 4/5 : 329 (1893). — Typ.: *Centaurea* L.

*Acta Botanica Academiae Scientiarum Hungaricae, Tomus 19 (1—4), pp. 73—79 (1973)*

# PRELIMINARY NOTES ON THE SUBTRIBE CENTAUREINAE

By

J. DOSTÁL

PRAHA

(Received: January 1, 1973)

The present paper deals with the taxonomy of the subtribe *Centaureinae* (fam. *Asteraceae*): the author divided this subtribus into 51 genera. The types and some other data of these genera are added.

The taxonomy of the subtribe *Centaureinae* is made difficult by the relative uniformity of the floral characters and by variability of the vegetative organs. The main guide for the systematic arrangement of the genera is the presence of assumed primitive characters in the oldest taxa, e. g. suffruticulous, woody at the base, leaves not divided, not decurrent, heads great, bracts large, relatively thick at base, with indistinct, not divided appendages, florets relatively large, corollas 5-fide, achens large, each with a paleaceous pappus. The delimination of genera is also very difficult and dependent on the opinion of the taxonomist, because to elect a certain group of characters for a delimitation of genera from the set of all taxonomic important characters of species of this subtribus is almost impossible. With regard to the geographical areas, to the evolution, to the trends of variability, to the karyotypes, to the homogenity and also to the complex of morphological as well as anatomical characters respectively, the following distribution of the subtribus in small genera is presented.

I have used the morphology of pollen grains as a basis for the inner taxonomy of the subtribus, because WAGENITZ (1955) has discovered a very interesting and important feature, i. e. that there are 7 main forms of pollen grains, which are in close relation to the evolution, morphology, as well as to the karyotype and phytogeography of the groups concerned. I have classified groups of indentical pollen grain-type according to the morphology of fruits (as has been elaborated by DITTRICH) and of the involucral bracts and their appendages, as well as according to the habits of plants. The total habitus is a very important character, its evolution is in accordance with the evolutionary morphology of the different organs.

*Asteraceae* — tribus *Cardueae* Melchior in Engl. Syl., Pfl.-Fam., ed 12, 2: 494 (1964). — Typ.: *Carduus* L. — Subtribus *Centaureinae* Hoffm. in Engl. et Prantl Nat. Pfl.-Fam. 4/5 : 329 (1893). — Typ.: *Centaurea* L.

§ 3. Pollentype "*Crupina*" (Wagenitz 1955)

23. **Crupina** Cass. Dict. **12** : 67 (1819). — Typ.: *Centaurea crupina* L. Sp. 909 (1753) = *Crupina vulgaris* Pers. ap. Cass. Dict. **12** : 68 (1819). — Spec. 4 x = 14, 15 — Eurasia, Africa borealis

§ 4. Pollen type "*Scabiosa*" (Wagenitz 1955)

24. **Colymbada** Hill. Veg. syst **4** : 31 (1762) p. p. em. Holub in Pres 44 : 217 (1972). — *Sagmen* Hill. l. c. 35 (1762) p.p. — Typ.: *Centaurea colli* L. Sp. pl. 918 (1753) ≡ *Colymbada collina* (L.) Holub in Folia phytotaxo geob. **7** : 315 (1972). — Spec. 113 — x = 9, 10, 11, 12, 15 — Eurasia, Afri borealis.

25. **Stephanochilus** Coss. et Durieu Pl. Alger. exsicc. ex Benth. in Bent et Hook. f. Gen. pl. **2** : 477 (1873). — Typ.: *Centaurea omphalodes* Coss. Durieu in Bull. Soc. bot. France **42** : 397 (1875). ≡ *Stephanochilus omphalod* (Coss. et Durieu) Coss. et Durieu Fl. Alger. exsicc. ex Benth. in Benth. Hook. f. Gen. pl. 477 (1873). — Spec. 1 — x = ? Africa borealis

§ 5. Pollen type "*Jacea*" (Wagenitz 1955)

26. **Grossheimia** Sosnovski et Takhtajan in Doklady Ak. n. SSSR **2/1** : 2 (1945). — Typ.: *Centaurea macrocephala* Muss.-Puschk. ex Willd. Sp. p **3/3** : 2298 (1903) ≡ *Grossheimia macrocephala* (Muss.-Puschk.) Sosnovski Takhtajan in Doklady Ak. n. SSSR 2/1 : 23 (1945). — Spec. 2 — x = 9 — Asi Minor et Caucasus.

27. **Chartolepis** Cass. Dict. **44** : 36 (1826). — Typ.: *Centaurea glastifoli* L. Sp. pl. 915 (1753) ≡ *Chartolepis glastifolia* (L.) Cass. Dict. **54** : 492 (1829 — Spec. 4 — x = 9, 12 — Eurasia

28. **Wagenitzia** Dostál gen. n. — Rhizoma polycephalum, crassum caulis basi foliis emortuis obtectus; folia elevatim venulosa, apice spinulos mucronata; anthodia medicora, involucra ovoidea, bracteae apice spinosa spinis basi fere palmato spinulosis; corollae luteae; achaenia compressa pappus duplex, setis scabris. — In honorem cl. prof. GERH. WAGENITZ in taxonomia generis *Centaurea* investigatoris celeberrimi dedicatum. — Typ. *Centaurea lancifolia* Sieb. ex Spreng. Syst. veg. **3**:405 (1826) ≡ *Wagenitzi lancifolia* (Sieb. ex Spreng.) Dostál comb. n. — Spec. 3 — x = ? Insula Creta e Samos, Asia Minor (et? Africa boreal.)

29. **Tomanthea** DC. Prodr. **6** : 564 (1838), amplif Takhtajan in Trud molod. naučn. rabotn. Armjans. Ak. N. SSSR **1939** : 240 (1939) et Czerepano in Not. system. herb. Inst. bot. Ak. Sc. Leningrad **20** : 472 (1966). — Typ. *Tomanthea aucheri* DC. Prodr. **6** : 564 (1838) — Spec. 7 — x = 9 — Asia occid. et centr.

30. **Paraphysis** (DC.) Dostál stat. n. — Basion: *Amberboa* sect. Paraphysis DC. Prodr. 6:560 (1838). — Typ.: *Amberboa decurrens* DC. Prodr. 6 : 560