STUDIA BOTANICA HUNGARICA
(Antea: Fragmenta Botanica)
XXI. 1989 p. 45–52

# New floristical data from the Mongolian People's Republic

by
F. NÉMETH

(Received November 30., 1989.)

A b s t r a c t : 85 new floristical data are published from the Mongolian People's Republic based on the author's collections in the years 1983–1989. Four species – *Asplenium ruta-muraria* L., *Astragalus candidissimus* Ldb., *Limonium sedioides* (Rgl.) Ktze. and *Oxytropis puberula* Boriss. – are new for the Mongolian flora. Most of the new finds come from the floral districts Mongol Altai and Dzhungaar Gobi.

In the course of four trips to Mongolia (1983, 1986, 1988, 1989) I have collected about 800 species of higher plants. This collection has been shared between the Botanical Institute of the Academy of Science of MPR, Ulaanbaatar, and the Botanical Department of the Hungarian Natural History Museum, Budapest. A considerable part of this material needs further investigations as yet. This paper contains the new data of occurrence of the undoubtedly well indentified taxa. Besides them I should correct several wrongly published data based on my former collections (SANCZIR, RACHKOVSKAYA and BUYAN-ORSHIKH, 1985b).

## Description of the collecting sites
(Fig. 1)

*In the floral district Dzhungaar Gobi (DG):*

1. Ongok (On): a shepherds' shelter on the right side of the Bulgan river in the foreground of the Mongol Altai about 20 km from the Chinese border and 60 km to the west from Bulgan sum. Rocky, hilly country and small basins with undisturbed semidesert vegetation and many middle-asian floral elements.

2. Bulgan (Bu): Bulgan sum (Burenkhairkhan), county center in Khovd district. Its vegetation is very varied and the flora is extremely rich, especially on certain refugees of the inundation area of Bulgan river, which are protected form grazing. Besides them the desert and semidesert habitats are also very diverse (sandy and salty plains, acidic and alkaline rocky hills, etc.).

3. Uench (Ue): mosaic of rocky hills, valleys and basins around Uench village, similar to the habitats of Ongok.

*In the floral district Mongol Altai (MA):*

4. Altai somon (Al): a dry valley in the southern foothills of Mongol Altai, about 50 km to the northeast from village Altai somon.

5. Tsunkl nor (Tn): a salt lake over the upper reach of Bulgan river in a small high mountain basin on 2500 m above the sea level; the height of the surrounding peaks is about 3500 m. There are mountain steppes till 2800 m and subnivale rock-vegetation over them.

6. Munkh Khairkhan (Mh): the central ridge of Mongol Altai with peaks over 4300 m and plateaus about 3000 m above the sea level; this latter ones with subnivale semideserts. The collecting places are situated on the north-eastern side of the ridge and around Munkh Khairkhan village.

7. Mankhan (Ma): a long, narrow canyon in marble stone in the northern foothills of Mongol Altai about 20 km to the southeast from Mankhan village. Its flora and vegetation are extremely rich and full with relics in comparison with the surrounding semidesert area.

8. Must (Mu): subnivale semidesert on limestone ground on 2300 m above the sea level, about 50 km to the northwest from Must (Ulaantolgoy) village.

9. Tsetsegnur (Ts): plain semidesert on debris ground about 20 km to the east from Tsetsegnur village.

10. Sutai ula (Su): the southern slope of the Tsast Bogdo peak (4096 m) in the Sutai ridge between the 3000–3600 m levels with an overgrazed subnivale rock-vegetation.

*In the floral district Lakes' Basin (LB):*

11. Khara Uvs nor (Hn): plain semidesert on debris ground at the southern shore of Khara Uvs lake about 30 km to the southeast from the district center Khovd.

12. Khovd (Ho): plain semidesert on sand and debris and granitic hills in northern foreground of Khovd city.

13. Chono Kharaikh gol (Chg): channel between the Khara Uvs and Khara lakes with humid meadow vegetation.

*In the floral district Lakes' Valley (LV):*

14. Adgyn Tsagan nor (An): moving sandhills about 20 km to the southeast from the Adgyn Tsagan lake.

*In the floral district Gobi Altai (GA):*

15. Bon Tsagan nor (Bn): a northern valley of the Argalantyn mountains about 30 km to the south from the Bon Tsagan lake with semidesert shrub vegetation.

16. Gurvan Tes (GT): salt-marshes and halophile meadowvegetation around Gurvan Tes village.

17. Bayan Dalay (BD): moving and half-settled sandhills about 10 km to the southeast from Bayan Dalay village.

*In the floral district Khangai (HA):*

18. Naryn Teem (NT): granitic hills with semidesert vegetation along the Arvayheer – Bayanhongor main road about 40 km to the east from Naryn Teem village.

19. Tuyn gol (Tg): the watershed of the Tuyn and Urd Tamir rivers on the Suvraga Khairkhan ridge with mountain tundra vegetation on 2800–3000 m above the sea level.

20. Tugsin Khoshuu (TH): mountain semidesert at about 1600 m above the sea level along the Kharkhorin – Arvayheer road about 50 km to the south from Tugsin Khoshuu village.

*In the floral district Mongol Dauria (MD):*

21. Sharyngol (Sg): peatbogs along the Sharyn river about 10 km to the north from the mining town Sharyngol.

22. Songino (So): the inundation area of the Toola river between Songino and the Ulaanbaatar airport.

*In the floral district Middle Khalkha (MH):*

23. Ikh Khairkhan (Ih): granitic hills with semidesert vegetation on the southeastern edge of the Ikh Khairkhan mountains about 10 km to the northwest from Ikh Khan village.

24. Choir (Ch): a salt lake and short-grass steppes about 30 km to the southwest from the railway station Choir.

## LIST OF THE NEW FLORISTICAL DATA

*New elements of the Mongolian flora:*

*Asplenium ruta-muraria* L.: MA: Ma, 1986.08.10., 1989.08.23.
*Astragalus candidissimus* Ldb.: DG: Bu, 1983.07.02.
*Limonium sedioides* (Rgl.) Ktze.: GA: Bn, 1988.08.03.
*Oxytropis puberula* Boriss.: DG: Bu, 1986.08.01.

New data of occurrence in the floral districts of MPR:

*Amethystaea coerulea* L.: LB: Ho, 1986.07.28.
*Ancathia igniaria* (Spreng.) DC.: DG: On, 1986.08.02.
*Anoplocaryum compressum* (Turcz.) Ldb.: LB: Ho, 1983.06.26., 1986.07.28.
*Arnebia decumbens* (Vent.) Coss. et Kral.: DG: On, 1986.08.02.
*Asterothamnus heteropappoides* Novopokr.: DG: Bu, 1983.07.02.
*Astragalus altaicus* Bge.: MA: Al, 1989.08.19.
*Astragalus argutensis* Bge.: MA: Mh, 1983.07.14., Ma, 1983.07.15.
*Astragalus depauperatus* Ldb.: MA: Mh, 1986.08.09., Ma, 1986.08.10.
*Astragalus granitovii* Sancz.: MA: Ue, 1986.08.01.
*Astragalus grubovii* Sancz.: LB: Ho, 1986.07.28.
*Astragalus hypogaeus* Ldb.: MA: Tn, 1983.07.09., Al, 1989.08.19.
*Astragalus junatovii* Sancz.: GA: BD, 1988.07.29., HA: TH, 1989.08.12.
*Astragalus pseudovulpinus* Sancz.: DG: On, 1986.08.02.
*Astragalus sabuletorum* Ldb.: MA: Ue, 1986.08.01.
*Astragalus scabrisetiformis* Sancz.: DG: On, 1986.08.02.
*Astragalus vallestris* R. Kam.: LB: Ho, 1986.07.28., MA: Tonkhil village, 1989.08.18.
*Batrachium mongolicum* (Kryl.) Krecz.: DG: Bu, 1983.07.02.
*Beckmannia syzigachne* (Steud.) Fern.: DG: Bu, 1983.07.02.
*Bidens parviflora* Willd.: LB: Ho, 1986.07.28.
*Bromus korotkyi* Drob.: LV: An, 1988.08.03.
*Calamagrostis pseudophragmites* (Hall f.) Koel.: DG: Bu, 1983.07.02.
*Caragana spinosa* (L.) DC.: DG: Bu, 1983.07.02.

*Cancrinia discoidea* (Ldb.) Poljak.) DG: Bu, 1986.08.03.
*Chorispora sibirica* (L.) DC.: MA: Tn, 1983.07.09., DG: On, 1986.08.02.
*Clematis intricata* Bge.: DG: Bu, 1983.07.02., 1986.08.03.
*Crepis tectorum* L.: DG: Bu, 1983.07.02., no adventive!
*Dianthus soongoricus* Schischk.: DG: On, 1986.08.02.
*Dianthus versicolor* Fisch.: LB: Ho, 1986.07.28.
*Dontostemon crassifolius* Bge.: MA: Ts, 1989.)8.19.
*Dontostemon elegans* Maxim.: DG: On, 1986.08.02.
*Euphorbia tschuiensis* (Prokh.) Serg.: MA: Ma, 1983.07.15.
*Ferula soongorica* Pall.: MA: Ma, 1983.07.15.
*Gypsophila dahurica* Turcz.: MH: Ch, 1986.08.25.
*Gypsophila desertorum* (Bge.) Fenzl: MH: Ch, 1986.08.25.
*Helictotrichon asiaticum* (Roshev.) Grossh.: MA: Tn, 1986.08.07.
*Heteropappus altaicus* (Willd.) Novopokr.: DG: Bu, 1983.07.02.
*Inula britannica* L.: LB: Chg, 1989.08.24.
*Juncus triglumis* L.: MA: Mu, 1983.06.30.
*Lagochilus diacanthophyllus* (Pall.) Benth.: DG: On, 1986.09.02., Ue, 1989.08.19.
*Lathyrus palustris* L.: DG: Bu, 1983.07.02.
*Limonium semenovii* (Herd.) Ktze.: MA: Ts, 1989.08.18., LB: Hn, 1983.06.29., 1989.08.22.
*Microstigma deflexa* (Bge.) Juz.: MA: Ho, 1983.07.12.
*Olgaea leucophylla* (Turcz.) Iljin: GA: BD, 1988.07.29.
*Orostachys fimbriata* (Turcz.) Berger: LB: Hn, 1989.08.22.
*Oxytropis sutaica* Ulzij.: MA: Mu, 1983.06.30., Mh, 1983.07.14., 1989.08.22.
*Pachyneurum grandiflorum* (C.A. Mey.) Bge.: MA: Mu, 1983.06.30., Ma, 1983.07.15., 1986.08.10., Mh, 1986.08.09.
*Paraquilegia microphylla* (Royle) Drum. et Hutch.: MA: Ma, 1983.07.15., 1986.08.09.
*Parietaria debilis* Forst f.: LB: Ho, 1986.07.28.
*Parrya exscapa* C.A. Mey.: MA: Su, 1989.08.17.
*Patrinia intermedia* (Hornem.) Roem. et Schult.: DG: On, 1986.08.02., Ue, 1986.08.01.
*Pedicularis oederii* Vahl: MA: Mh, 1983.07.15.
*Peganum harmala* L.: LB: Ho, 1983.06.28.
*Peucedanum salinum* Pall. ex Spreng.: MH: Ch, 1986.08.25.
*Phlomis oreophila* Kar et Kir.: LB: Ho, 1983.06.28.
*Polypodium virginianum* L.: MH: Ih, 1988.07.24.
*Potamogeton filiformis* Pers.: MA: Tn, 1986.08.07.
*Potentilla fragarioides* L.: MA: Ma, 1983.07.15.
*Primula nutans* Georgi: MA: Mu, 1983.06.30., Mh, 1983.07.14.
*Ptilagrostis pelliotii* (Danguy) Grub.: DG: Bu, 1983.07.02.
*Pulsatilla bungeana* C.A. Mey. *var. (ssp.?) astragalifolia* (Pobed.) Grub.: LB: Ho, 1983.07.12.
*Ranunculus pedatifidus* Smith: MA: Tn, 1983.07.09.
*Rheum nanum* Sievers: DG: On,1986.08.02.
*Salsola passerina* Bge.: MH: Ch, 1986.08.25.
*Saussurea acuminata* Turcz.: MD: Sg, 1986.08.17.
*Saussurea glacialis* Herd.: MA: Su, 1989.08.17.
*Saussurea latifolia* Ldb.: HA: Tg, 1988.08.05.
*Saussurea saichanensis* Kom. ex Lipsch.: MA: Ma, 1983.07.15.
*Saxifraga oppositifolia* L.: MA: Tn, 1983.07.09.
*Scutellaria grandiflora* Sims: DG: Bu, 1986.08.01.

*Sphaerophysa salsula* (Pall.) DC.: DG: Bu, 1983.07.02.
*Suaeda przewalskii* Bge.: GA: GT, 1988.07.31.
*Sweertia banzragcii* Sancz.: MA: Mh, 1986.08.09.
*Thellungiella salsuginea* (Pall.) O.E. Schultz: MA: Tn, 1983.07.09.
*Veronica biloba* L.: MA: Tn, 1983.07.08.
*Vicia semenovii* (Rgl. et Herd.) B. Fedtsch.: HA: NT, 1989.08.13.
*Woodsia glabella* R.Br.: MA: Ma, 1983.07.15., 1989.08.23.
*Youngia tenuicaulis* (Babc. et Stebbins) Czern.: MA: Ma, 1983.07.15.
*Zannichellia pedunculata* Rchb.: MD: So, 1986.08.29.
*Zygophyllum kaschgaricum* Boriss.: DG: On, 1986.08.02.
*Zygophyllum potaninii* Maxim.: DG: On, 1986.08.02.

## CORRECTION OF SOME WRONGLY PUBLISHED DATA

Unfortunately some data of my herbarium given to the Botanical Institute of the Academy of Science of MPR have been published inaccurately (SANCZIR, RACHKOVSKAYA and BUYAN-ORSHIKH 1985b), namely *Arnebia decumbens* (Vent.) Coss. and *Dodartia orientalis* L. were collected at Bulgan sum, Dzhungaar Gobi, by me, and not at Mankhan, Mongol Altai, by Jankó Béla.

A c k n o w l e d g e m e n t s : I owe a debt of gratitude to dr. N. Ulziykhutag and dr. Ch. Sanczir (Botanical Institute of the Academy of Science of MPR, Ulaanbaatar), furthermore to dr. Béla Jankó (Botanical Department of the Hungarian Natural History Museum, Budapest) for their help of great value in taxonomical identification.

## REFERENCES

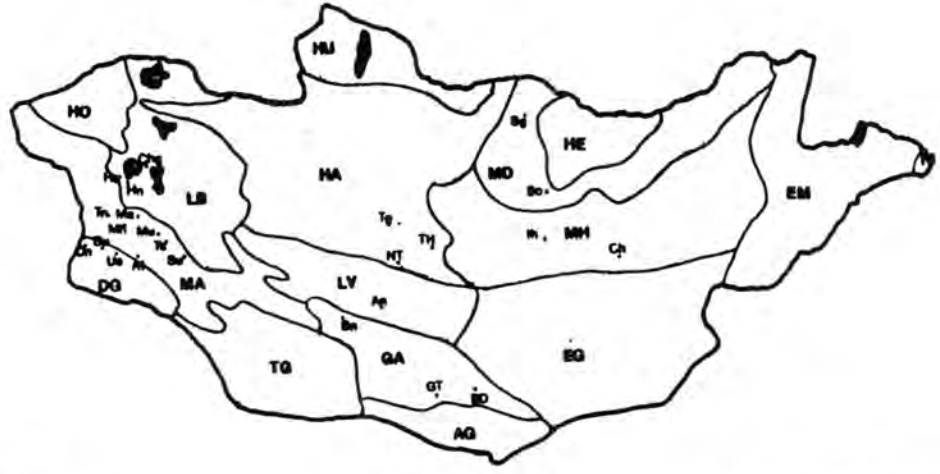
BEKET, U., KARAMYSHEVA, Z. V. et SANCZIR, CH. (1982): Novie vidi dlya flori MNR. – Novosti sistematiki vyssikh rasteniy, *19*: 185–188.
GRUBOV, V. I. (1982): Opredelitel' sosudistikh rasteniy Mongolii (Key to the vascular plants of Mongolia). – Leningrad, Nauka 441 pp.
GUBANOV, I.A. et GANBOLD, E. (1982): Sosudistie rasteniya. In: Flora vostochnogo Khangaya (MNR) – Leningrad, Nauka, 100–166 pp.
HILBIG, W. et ZHAMSRAN, C. (1980): Zweiter Beitrag zur Kenntniss der Flora des westlichen Teiles der Mongolischen Volksrepublik. – Feddes Repertorium, *91*: 1–2.
SANCZIR, CH. (1984): Noviy vid roda *Sweertia* iz MNR. – Novosti sistematiki vyssikh rasteniy, *21*: 136–138.

SANCZIR, CH., RACHKOVSKAYA, E. I. et BUYAN–ORSHIKH, H. (1985a): Urgamlinshine, sonirkholtoy oldvor (New and interesting finds for flora of MPR). – Shindzhlekh ukhaani akademiyn medee, 1985/III: 49–56.

SANCZIR, CH., RACHKOVSKAYA, E. I. et BUYAN–ORSHIKH, H. (1985b): Urgamlinkhovor, sonirkholtoy oldvor (Rare and interesting finds for flora of MPR). – Shindzhlekh ukhaani akademiyn botanikiyn khureelengiyn buteel (Trudi Instituti Botaniki Akademii Nauk MNR), 1985/11: 30–4).

Author's address: F. NÉMETH
Botanical Department of the
Hungarian Natural History Museum
Budapest, Pf. 222.
H–1476
HUNGARY

Fig. 1. Map of the Mongolian People's Republic




Floral districts of
MPR (after GRUBOV 1982):

AG: Alashan Gobi
DG: Dzhungaar Gobi
EG: East Gobi
EM: East Mongolia
GA: Gobi Altai
HA: Khangai
HE: Khentei
HI: Khingan
HO: Khobdo
HU: Khubsugul
LB: Lakes' Basin
LV: Lakes' Valley
MA: Mongol Altai
MD: Mongol Dauria
MH: Middle Khalkha
TG: Transaltai Gobi

Collecting sites of the new floristic findings:

ON: Ongok
Bu: Bulgan
Ue: Uench
Al: Altai somon
Tn: Tsunkl nor
Mh: Munkh Khairkhan
Ma: Mankhan
Mu: Must
Ts: Tsetsegnur
Su: Sutai Ula
Hn: Khara Uvs nor
Ho: Khovd
Chg: Chona Kharaikh g.
An: Adgyn Tsagan nor
Bn: Bon Tsagan nor
GT: Gurvan Tes
BD: Bayan Dalay
NT: Naryn Teem
Tg: Tuyn gol
TH: Tugsin Khoshuu
Sg: Sharyngol
So: Songino
Ih: Ikh Khairkhan
Ch: Choir