

NOTES ON THE FLORA AND VEGETATION OF S.
BALUCHISTAN, IRAN

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Notes about the subtropical vegetation on the lowland plains along the Dashtiari river, close to the border of Pakistan are given. The following species from the area are reported as new to the flora of Iran: *Coelachyrum piercei*, *Commicarpus helenae*, *Digitaria nodosa*, *Dipterogium glaucum*, *Enneapogon brachystachyus*, *Maerua arenaria* and *Farsetia ramosissima*. Comments are given on the distinction between *Lasiurus hirsutus* and *L. scindicus*. The confusion about naming of material of *Acacia ehrenbergiana* from Iran is reviewed.

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نکاتی در مورد فلور و پوشش گیاهی جنوب بلوچستان، ایران
از: اسدی و رونهمارک

مطالبی در مورد پوشش گیاهی جلگه‌های پست امتداد رودخانه دشتیاری تهیه و گونه‌های زیر از منطقه مورد مطالعه برای اولین بار از ایران گزارش داده میشوند. *Coelachyrum piercei*, *Commicarpus helenae*, *Digitaria nodosa*, *Dipterogium glaucum*, *Enneapogon brachystachyus*, *Maerua arenaria* and *Farsetia ramosissima*.

دوگونه *Lasiurus hirsutus* و *L. scindicus* مقایسه و مطالبی در مورد اختلافات و محدودیت دوگونه توضیح داده میشود. علاوه براین اشکالات تعیین نام *Acacia ehrenbergiana* در ایران مورد مطالعه قرار گرفته است.

Introduction

Makran, the southernmost part of Baluchistan, belongs to the botanically least known regions of Iran. Especially the area south of Bam-poor and Iranshahr down to the coast is very little explored. Scattered records exist from the lowland areas while the mountains, up to 1000-1500 m high, are botanically unknown. Mountains of coastal areas with high air humidity may be of particular interest.

In the past the area was not easily accessible but lately a good asphalt road has been built from Zahedan by way of Khash, Iranshahr and Rask to Chahbahar at the coast. In the beginning of March 1977, the area was visited by members of the Botanical Institute of Iran staff (Runemark, Assadi and Sardabi; R., A. & S. in locality lists) and also in November (Assadi and Mozzafarian; A. & M. in locality lists). — We are grateful to Prof. Rechinger for suggesting preliminary names for many species of the spring collection during his visit to Botanical Institute of Iran in early summer 1977.

Herbarium material of all species mentioned in the text are preserved at TARI, duplicates of many species at LD.

The vegetation in the Dashtiari river plains

The Dashtiari river plains from Chahbahar to the Pakistan frontier extends northwards c. 100 kilometer to Rask at an altitude of 350 m. The rock in the area seems mainly to be sand-stones. Limestones were not observed. The northernmost part is mostly dry steppe with woody vegetation confined to rivers

and wadis. In the southernmost part rather extensive salt steppes occur while the remainder of the plains are characterized by pseudo-savanna with low trees, especially luxuriant in sandy area.

The area has a subtropical flora, dominated by Saharo-Sindian and Sudanian species, Irano-Turanian species are almost wholly lacking, but may penetrate into the surrounding mountains. For instance *Amygdalus eburnea* was found in the mountains north of Rask at an altitude of 800 m.

Pseudo-savanna

The term pseudo-savanna is used in the sense of Zohary (1973) for a subtropical vegetation with scattered trees but without a dominating grass cover. The dominating tree is *Ziziphus spina-christii* or in more sandy areas *Prosopis cinerea* (*P. spicigera*). The vegetation is influenced by heavy grazing.

Among trees and shrubs occurring can be mentioned:

- Acacia ehrenbergiana*
- Aerva persica*
- Commicarpus stenocarpus*
- Convolvulus virgatus*
- Launaea capitata*
- *massanensis*
- *mucronata*
- Lycium edgeworthii*
- *shawii*
- Maerua arenaria*
- Prosopis cinerea* (*P. spicigera*)
- Tamarix* spp.
- Taverniera glabra*
- *spartea*
- Withania coagulans*
- Ziziphus spina-christii*

Along wadis the vegetation is usually more dense and several additional shrubs and trees species are found, e.g.:

- Capparis decidua* (*C. aphylla*)
- Commicarpus helenae*
- Grewia makranica*
- Kohautia* (*Oldenlandia*) *retrorsa*
- Maerua crassifolia*
- Salvadora oleoides*
– *persica*
- Scorzonera tortuosissima*

Even if grasses play a subordinate role, the number of species is rather high, including:

- Aristida coerulescens*
- Bromus rechingeri*
- Cenchrus ciliaris*
– *setigerus*
- Chrysopogon aucheri*
- Cymbopogon olivieri*
- Danthoniopsis stocksii*
- Dichanthium annulatum*
- Digitaria nodosa*
- Eleusine compressa*
- Enneapogon brachystachyus*
- Eremopogon foveolatus*
- Lasiurus hirsutus*
- Panicum antidotale*
– *turgidum*
- Sporobolus arabicus*
- Stipagrostis hirtigluma*

River vegetation

Along rivers *Tamarix* species play an important role, as in other arid areas in Iran. In southern Baluchistan *Tamarix* is often replaced by rather dense stands of *Nannorrhops ritchieana*, a small palm up to 4–5 m high, reaching as far to the north as Khash at an altitude of 1500 m. Among shrubs *Rhazya stricta* and *Neri-*

um indicum are very common and locally dominant.

Salt steppes

The salt steppes in the southern part of the river system are very poor in species, mainly *Suaeda* spp. and a few other chenopods.

Sea - shores

The sandy sea-shore near the harbour of Chahbahar was densely covered by a dwarf - shrub vegetation. The following species were collected :

- Aeluropus lagopoides*
- Coelachyrum piercei*
- Convolvulus* cf. *sericeus*
- Crotalaria furfuracea*
- Cyperus arenarius*
- Heliotropium* sp.
- Indigofera intricata*
- Lotus garcinii*
- Panicum turgidum*
- Sphaerocephalus aucheri*
- Tephrosia persica*

INTERESTING RECORDS

Acacia ehrenbergiana Hayne ex Schweinf.

Syn. *A. flava* (Forssk.) Schweinf.; non Spreng.

Makran: Chahbahar, Negor 30 m, Foroughi 10684; 20 km on road from Rask to Chahbahar, 300 m, wadi, R., A. & S. 22379.

Bandar Abbas: 10 km on road from Bandar Abbas to Minab, 30 m, pseudo -

savanna, R. 30839; 32 km on road from Bandar Abbas to Minab, 100 m, R. 30840; 30 km on road from Bandar Abbas to Sirjan, Foroughi 1103; near Hasan Langi on road to Rudan, 100 m, sand, Wendelbo & Foroughi 15644.

There has been much confusion about the name of the common, small *Acacia* tree in southernmost Iran with long straight spines, yellow flower heads, somewhat constricted and curved, narrow pods and leaves with only 1-2 pinnae.

The only correctly named record may be from Bandar Abbas by Parsa (1948 P. 488). He, apparently unnecessarily, created a new variety, *A. ehrenbergiana* v. *gracilis*. His records (l.c.) of *A. seyal* Delile and *A. jacquemontii* Benth. from S. Baluchistan, may in reality also be referable to *A. ehrenbergiana*. In a list of plants of 'the Sudanian territory' in Iran Zohary (1973 p. 253) included *A. flava* Spreng. The excellent illustration provided (l.c.p. 254) shows that the species meant is in reality *A. ehrenbergiana*. Sabeti (1976 p.61) indicates *A. seyal* from the Bandar Abbas area and Baluchistan, a species most probably not growing in Iran. He does not mention *A. ehrenbergiana* but from his illustrations of '*A. seyal*' it is evident that the species is in reality *A. ehrenbergiana*.

Authentic material of *A. ehrenbergiana* (in K and G) perfectly matches our Iranian gatherings.

Coelachyrum piercei (Benth.) Bor

Makran: Chahbahar, sandy sea shore near the harbour, R., A. & S. 22510

Previously known from western Pakistan and Arabia.

Commicarpus helenae (Roem. & Sch.) Meikle

Makran; 20 km on road from Rask to Chahbahar, 300 m, wadi, R., A. & S. 22370.

Distributed in tropical and subtropical Africa and Asia, eastwards to India. New to the flora of Iran.

Digitaria nodosa Parl.

Makran: 20 km on road from Rask to Chahbahar, 300 m, wadi, R., A. & S. 22377.

Distributed from NW. Africa to NW. India. Previously not recorded from Iran.

Dipterium glaucum Decne

Makran: 50 km to Bampoor on the road from Nikshahr, 600 m, A. & M. 25701.

In Hedge & Lamond (1970) questionably recorded from S. of Iran. Distribution map of this monotypic genus (cf. Hedge, Kjaer & Malver, 1970 p. 248) shows no locality from Iran. This species is found from Sudan through Saudi Arabia to Pakistan.

Enneapogon brachystachyus (Jaub. & Spach) Stapf

Makran: 20 km on road from Rask to



Fig. 1 *Coelachyrum piercei* (x 0.5).

Lasiurus hirsutus (Forssk.) Boiss.

Makran: 5 km on road from Rask to Chahbahar, 400 m, dry hills, R., A. & S. 22531; 30 km on road from Rask to Chahbahar, 150 m, wadi with dominating *Nannorrhops*, R., A. & S. 22434.

The two collections make the distinction between *L. hirsutus* and *L. scindicus* Henrard rather obscure. R., A. & S. 22531 has 7-8 mm long inferior glumes characteristic of *L. hirsutus*, but the culm below the inflorescence and the nodes are covered by (rather short) appressed hairs, a character of *L. scindicus*. R., A. & S. 22434 has 11 - 12 mm long inferior glumes as in *L. scindicus*, but the culm below the inflorescence and the uppermost nodes are glabrous as in *L. hirsutus*. The lowermost nodes are densely covered by hairs, a character, however, sometimes found also in *L. hirsutus*. — A careful study on extensive material is needed for an evaluation of diagnostic characters. — *L. hirsutus* is distributed from tropical Africa to Afghanistan and W. India. In Pakistan it is replaced by *L. scindicus*. There is only a single previous record of the genus from Iran, a collection from Makran, determined to *L. scindicus* (Bor 1970 p. 527).



Fig. 2 *Enneapogon brachystachyus* (nat. size).

Chahbahar, 300 m, wadi and stony desert, R., A. & S. 22382.

Distributed from North Africa to India. Previously not recorded from Iran.

Farsetia ramosissima Hochst. ex Boiss.

Makran: 71 km from Rask on road to Chahbahar, 100 m, sand dunes, R., A. & S. 22442.

known from NE. Africa and Pakistan. Previously not recorded from Iran.

Maerua crassifolia Forssk.

Makran: 20 km on road from Rask to Chahbahar, 300 m, wadi, R., A. & S. 22369; 105 km on road from Chahbahar to Rask, 350 m, hamada desert, R., A. & S. 22525.

Distributed from North and Tropical



Fig. 3 *Farsetia ramosissima* (x 0.4).



Fig. 4 *Maerua arenaria* (x 0.6).



Fig. 5 *Maerua crassifolia* (x 0.6).

Africa to Arabia and western Pakistan.

Maerua arenaria (DC.) Hook. f. & Thoms.
in Hook.

Makran: 210 km from Iranshahr on road
to Chahbahar, at Negor, 250 m, pseudo-
savanna, A. & M. 25663.

Known from Pakistan, India and Ceylon.
Not previously recorded from Iran.

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