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Studies on the flora of Yemen. 3. On the Flora of Wadi Dahr

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RÉSUMÉ

DUBAIE, A. S., A. N. GIFRI & M. EL-MONAYERI (1993). Etude de la flore du Yémen. 3. Sur la flore de Wadi Dahr. *Candollea* 48: 101-109. En anglais, résumés français et anglais.

Les auteurs ont récoltés à Wadi Dahr de 1988 à 1990, 234 espèces appartenant à 53 familles et en particulier 4 espèces de *Polypodiaceae*.

ABSTRACT

DUBAIE, A. S., A. N. GIFRI & M. EL-MONAYERI (1993). Studies on the flora of Yemen. 3. On the Flora of Wadi Dahr. *Candollea* 48: 101-109. In French, French and English abstracts.

In the period 1988 to 1990 the authors collected 234 species belonging to 53 families, among them 4 species belonging to *Polypodiaceae,* from Wadi Dahr.

KEY-WORDS: Flora — Wadi Dahr — Yemen.

This study is based on collections made during 1988/90 and also on preceding works on Wadi Dahr made by ALHUBASHI & al. (1991), DUBAIE & al. (1990) and EL-MONAYERI & al. (1991). Wadi Dahr is a fertile valley 10 Km North West of Sana'a, the capital of Yemen.

Wadi Dahr lies in the volcanic highlands of Yemen between long. 44°05'-44°10'E. and lat. 15°25'-15°30'N. with an altitude ranging between 2000-2800 m asl. The Wadi extends for a distance of ca. 10 km.

This area is in the semi-arid region; the climate being determined primarily by altitude. The mean temperature in summer is 22°C and in winter drops to near or below freezing point at night. The mean relative humidity is low throughout the year. The total mean annual rainfall is about 227.6 mm.

Several references used as a guide for identification of the plants collected are: ALHUBAISHI & al. (1984, 1991); COLLENETTE (1985); DUBAIE & al. (1990a, 1990b, 1991) and EL-MONAYERI & al. (1991).

The herbarium material is housed in the Herbarium of the Faculty of Science, University of Sana'a.

The species are listed hereafter, according to family, in alphabetical order.

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ACANTHACEAE

Acanthus arboreus Forssk.
Blepharis ciliaris (L.) B. L. Burtt
Justicia flava (Vahl) Vahl
Ruellia patula Jacq.

AIZOACEAE

Aizoon canariense L.
Zaleya pentandra (L.) C. Jeffrey

AMARANTHACEAE

Achyranthus aspera L. var. *sicula* L.
Aerva javanica (Burm. f.) Juss. ex Schultes
Aerva lanata (L.) Juss. ex Schultes
Amaranthus chlorostachys Willd.
Amaranthus graecizans L. subsp. *graecizans*
Amaranthus hybridus L.
Pupalia lappacea (L.) Juss. var. *velutina* (Moq.) Hook.

AMARYLLIDACEAE

Crinum yemense Defl.

ANACARDIACEAE

Schinus molle L.
Schinus terpentifolius L.

ASCLEPIADACEAE

Calotropis procera (Aiton) Aiton f.
Caralluma deflersiana Lavr.
Caralluma penicillata (Defl.) N. E. Br.
Caralluma petraea Lavr.
Caralluma plicatiloba Lavr.
Caralluma quadrangula (Forssk.) N. E. Br.
Caralluma wissmanni Schwartz
Gomphocarpus sinaicus Boiss.
Kanahia laniflora (Forssk.) R. Br.
Pergularia daemia (Forssk.) Chiov.
Pergularia tomentosa L.
Rhytidocaulon macrolobum Lavr.
Sarcostemma sp.

BORAGINACEAE

Alkanna orientalis (L.) Boiss.
Anchusa millrei Willd.
Arnebia decumbens (Vent.) Coss. & Kral.
Heliotropium aegyptiacum Lehm.
Heliotropium dolosum De Not.

Heliotropium lasiocarpum Fisher & Mayer
Heliotropium longiflorum Hochst. & Steud.
Moltkiopsis ciliata (Forssk.) Johnston
Ogastemma pusillum Brummit
Trichodesma africanum (L.) R. Br.

CACTACEAE

Opuntia dillenii (Ker Gawler) How.
Opuntia ficus-indica L.

CAPPARACEAE

Capparis cartilaginea Decne.
Capparis decidua (Forssk.) Edgew.
Capparis spinosa L.
Cleome africana Botsch.

CARYOPHYLLACEAE

Cometes surattensis L.
Paronychia chlorothyrsa Murb.
Polycarpaea repens (Forssk.) Asch.

CELASTRACEAE

Catha edulis Forssk.

CHENOPODIACEAE

Atriplex leucoclada Boiss.
Chenopodium album L.
Chenopodium ambrosioides L.
Chenopodium murale L.
Chenopodium schraderianum Schultes
Cornulaca leucacantha Delile
Suaeda fruticosa Forssk. ex Gmel.
Suaeda vermiculata Forssk.

CISTACEAE

Helianthemum kahiricum Delile
Helianthemum lippii (L.) Dum.-Cours.

COMPOSITAE

Anthemis pseudocotula Boiss.
Anthemis sp.
Anvillea garcinii (Burm.) DC.
Bidens biternata (Lour.) Merr.
Carthamus tinctorius L.
Centaurea sinaica DC.
Conyza bonariensis (L.) Cronq.
Conyza incana Willd.

Conyza stricta Willd.
Conyza stricta Willd. var. *pinnatifida* (Don) Kitam.
Conyza sp.
Crisum vulgara L.
Echinops spinosissimus Turra
Felicia abyssinica A. Rich.
Felicia dentata (A. Rich) Dandy
Flaveria trinerva (Spereng.) Mohr
Gnaphalium luteo-album L.
Kleinia odora (Forssk.) DC.
Kleinia semperviva DC.
Onopordon sibthorpianum Boiss. & Heldr.
Osteospermum vaillantii (Decne.) Norl.
Phagnalon sinaiecum Bornm. & Kneucker
Pulicaria arabica (L.) Cass.
Pulicaria crispa (Forssk.) Benth. & Hook.
Pulicaria jaubertii Gamel-Eldin.
Pulicaria orientalis Jaub. & Spach
Pulicaria undulata (L.) Kostel.
Reichardia tingitana (L.) Roth
Reichardia tingitana (L.) Roth var. *arabica* (Hochst. & Steud.) Asch. & Schweinf.
Senecio schimperi Schultz-Bip.
Silybium marianum (L.) Gaertn.
Tagetes minuta L.
Vernonia abyssinica Schultz-Bip.
Vernonia cinerea (L.) Less.
Volutaria albicaulis Defl.
Xanthium spinosum L.

CONVOLVULACEAE

Convolvulus virigatus Boiss.
Cressa cretica L.

CRUCIFERAE

Brassica tournefortii Gouan
Diplotaxis erucoides (L.) DC.
Diplotaxis harra (Forssk.) Boiss.
Farsetia aegyptia Turra
Farsetia longisiliqua Decne.
Farsetia ramosissima Hochst. ex Boiss.

CUCURBITACEAE

Citrullus colocynthis (L.) Schrad.
Cucumis prophetarum L.

CYPERACEAE

Cyperus bulbosus Vahl
Cyperus laevigatus L.
Cyperus rotundus L.

EPHEDRACEAE

Ephedra alata Decne.

EUPHORBIACEAE

Euphorbia granulata Forssk.
Euphorbia helioscopia L.
Euphorbia inaequilatera Sond.
Euphorbia schimperi Presl
Euphorbia schimperiana Scheele
Ricinus communis L.

GRAMINEAE

Aeluropus littoralis (Gouan) Parl.
Aristida adscensionis L.
Bromus tectorum L.
Bromus tectorum L. var. *nudus* Klett. & Rich.
Cymbopogon schoenanthus (L.) Sprengel
Cynodon dactylon (L.) Pers.
Pennisetum divisum (Gmel.) Henrard
Pennisetum setaceum (Forssk.) Chiov.
Polypogon monspeliensis (L.) Desf.
Saccharum ravennae (L.) Murray
Schoenefeldia gracilis Kunch.
Setaria viridis (L.) P. Beauv.
Stipagrostis ciliata (Desf.) De Winter
Stipagrostis obtusa (Delile) Nees
Stipagrostis plumosa (L.) Munro ex T. Anders.

GERANIACEAE

Monsonia nivea (Decne.) Decne. ex Webb

JUNCACEAE

Juncus bufonius L.

LABIATAE

Lavandula pubescens Decne.
Lavandula stricta Delile
Leucas inflata Benth.
Mariandra benghalensis Benth.
Marrubium vulgara L.
Mentha lavandula Willd.
Mentha longifolia L. subsp. *schimperi* (Briq.) Briq.
Mentha piperata L.
Micromeria imbricata (Forssk.) Christen.
Nepeta deflersiana Schweinf. ex Hedge
Nepeta sheilae Hedge & King

Ocimum basilicum L.
Teucrium yemense Defl.
Thuspeinanta persica (Boiss.) Briq.

LEGUMINOSAE — CAESALPINOIDEAE

Cassia italica (Miller) Lam. ex Steudel
Cassia sinna L.

LEGUMINOSAE — MIMOSOIDEAE

Acacia ehrenbergiana Hayne
Acacia gerrardii Benth.
Acacia negrii Pichi-Sermolli
Acacia oerofota (Forssk.) Schweinf.
Acacia tortilis (Forssk.) Hayne

LEGUMINOSAE — PAPILIONOIDEAE

Astragalus abyssinicus Steudel
Astragalus fatimensis Hochst. ex Chiov.
Astragalus kahiricus DC.
Crotalaria emariginella Vatke
Crotalaria persica Merr.
Indigofera caerulea Roxb.
Indigofera oblongifolia Forssk.
Lotus corniculatus L.
Melilotus indica (L.) All.
Ononis natrix L.

MALVACEAE

Abutilon muticum (Del.) Webb
Abutilon pannosum (Forst. f.) Schlecht.
Althaea ludwigii L.
Hibiscus deflersii Schweinf.
Hibiscus micranthus L. f.
Hibiscus vitifolius L.
Malva parviflora L.

MORACEAE

Ficus palmata Forssk.
Ficus populifolia Vahl.
Ficus vasta Forssk.

NEURADACEAE

Neurada procumbens L.

NYCTAGINACEAE

Commicarpus boissieri (Heimerl) Cufod.
Commicarpus grandiflorus (A. Rich) Standley

Commicarpus plumbagineus (Car.) Standley
Commicarpus sinuatus Meikle

OLEACEAE

Olea chrysophylla Lam.
Olea sp.

OROBANCHACEAE

Orobanche cernua Loefl. var. *latebracteata* Beck

PAPAVERACEAE

Argemone mexicana L.
Argemone ochroleuca Sweet
Papaver rhoeas L.

PLANTAGINACEAE

Plantago lanceolata L.
Plantago major L.

PLUMBAGINACEAE

Limonium pruinosum (L.) Kuntze

POLYGALACEAE

Polygala abyssinica R. Br.

POLYGONACEAE

Calligonum comosum L'Hérit.
Emex spinosus (L.) Campderá
Polygonum salicifolium Brouss. ex Willd.
Rumex limoniastrum Jaub. & Spach
Rumex vesicarius L.

POLYPODIACEAE

Actiniopteris semiflabellata Pichi-Sermolli
Adiantum capillus-veneris L.
Adiantum incisum Forssk.
Asplenium trichomanes L.

RESEDACEAE

Caylusea hexagyna (Forssk.) M. L. Green
Ochradenus arabicus Chaudhary, Hill & Miller
Reseda decursiva Forssk.
Reseda sphenocleoides Defl.

RHAMNACEAE

Ziziphus nummularia (Burm. f.) Wight & Arn.
Ziziphus spina-christi (L.) Willd.

ROSACEAE

Rosa abyssinica R. Br.

RUBIACEAE

Coffea arabica L.

RUTACEAE

Ruta chalepensis L.

SALICACEAE

Salix alba L.

SCROPHULARIACEAE

Cistanche tubulosa (Schenck) Wight
Kickxia aegyptiaca (Dum.) Náb.
Kickxia elatine (L.) Dum. subsp. *crinita* (Mabille) W. Greuter

SOLANAEAE

Datura stramonium L.
Lycium shawii Roemer & Schultes
Solanum incanum L.
Solanum nigrum L.
Solanum nigrum L. var. *villosum* L.
Solanum schimperianum Hochst. ex A. Rich.
Solanum sepicula Dun.
Solanum unguiculatum A. Rich.
Solanum villosum Lam.
Withania somnifera (L.) Dun. in DC.

TAMARICACEAE

Tamarix aphylla (L.) Karst.
Tamarix nilotica (Ehrenb.) Bunge

THYMELEACEAE

Gnidia somalensis (Franchet) Gilg

UMBELLIFERAE

Foeniculum vulgare Mill.

URTICACEAE

Forskoalea tenacissima L.
Urtica sp.

VERBENACEAE

Lantana viburnoides (Forssk.) Vahl.

ZYGOPHYLLACEAE

Fagonia arabica L.
Fagonia glutinosa Del.
Fagonia indica Burm. f.
Peganum harmala L.
Tribulus terrstris L.
Zygophyllum simplex L.

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