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New Records of the Flora of the United Arab Emirates (Part 4)

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ABSTRACT. Recent extensive florisitic collections from U.A.E. especially the Masafi, Khor Fakkan and Hatta districts in the north east of the country, revealed the presence of 10 new taxa of the Flora of U.A.E. These are: *Paracaryum intermedium Trichodesma ehrenbergii (Boraginaceae), Campanula erinus (Campanulaceae), Cuscuta chinensis (Cuscutaceae), Monsonia heliotropioides (Geraniaceae), Ficus johannis (Moraceae), Papaver decaisnei (papaveraceae), Plantago albicans (Plantaginaceae), Rumex conglomeratus (Polygonaceae), Solanum surratense (Solanaceae).*

This study is based on collections made during many visits to the north eastern region of the United Arab Emirates, bordering the Sultanate of Oman (Fig. 1). This area does not seem to have been well explored botanically and the author was fortunate enough to make records in 1990-1992 of many new taxa of flora there,well known however in the Mediterranean region and some other parts of the world.

Topographically the area comprises oasis plains, hills, wadis and mountains. The wadis of these regions mostly crossing sea mail Ophiolite of possible middle Cretaceous age, volcanics, metamorphic rocks and metasediments.

The climate of this region is characterised by low rainfalls and high temperatures; the mean annual rainfall being 70-150 mm in January, the mean maximum air temperature 43.6°C in June while the mean minimum air tempeature is 8.5°C in January and the mean annual relative humidity is over 70%.

The assessment of the "new records" is based on "Flora of United Arab Emirates: An Introduction" (Western 1989), "The Living Desert" (Jongbloed 1987) and other Floras of the adjacent countries, *e.g.* Flora of Saudi Arabia (Migahid 1978), Flora of Iraq (Townsend and Guest 1974-1980) and Ecology and Flora of Qatar (Batanouny 1981).

Specimens were deposited in the National Herbarium of United Arab Emirates University, The Desert and Marine Environment Research Centre in Al-Ain, (UAENH) and duplicates were delivered to the Herbarium of the Royal Botanic Gardens in Edinburgh (E).

The following is a list of the species alphabetically, family wise, arranged and indicated as "new" in the flora of the United Arab Emirates. The abbreviations used in the text are:

fl. = flowering specimen

fr. = fruiting specimen

Boraginaceae

1. *Paracaryum intermedium* (Fresen.) Lipsky.
Syn.: *Paracaryum micranthum* (DC) Boiss., *Cynoglossum intermedium* Fresen.

General distribution : Jordan (Al-Eisawi 1982), Egypt (Sinai), Syria (Hammah)(Post and Dinsmore 1932-33), Saudi Arabia (Collenette 1985 and cf. Frey and Kürschner 1990 and Hilger *et al.* 1985). Also found in Oman (Ghazanfar 1992).

Local distribution : (fl. and fr.). Hatta district, 280 m, on hill side among rocks, 3-3-1992, F.M. Karim 7040.

2. *Trichodesma ehrenbergii* Schweinf. ex Boiss.
Syn.: *Trichodesma africanum* L. *var. ehrenbergii* (Schweinf.) Post.

General distribution : Jordan (Al-Eisawi 1982), Egypt (Sinai), (Post and Dinsmore 1932-33) and Saudi Arabia (Collenette 1985). Also found in East Sudan (Miller personal information).

Local distribution : (fl.) Khor Fakkan, near Jebel Wadishi 140m, sandy gravelly soil, 24-2-1992, F.M. Karim 6806.

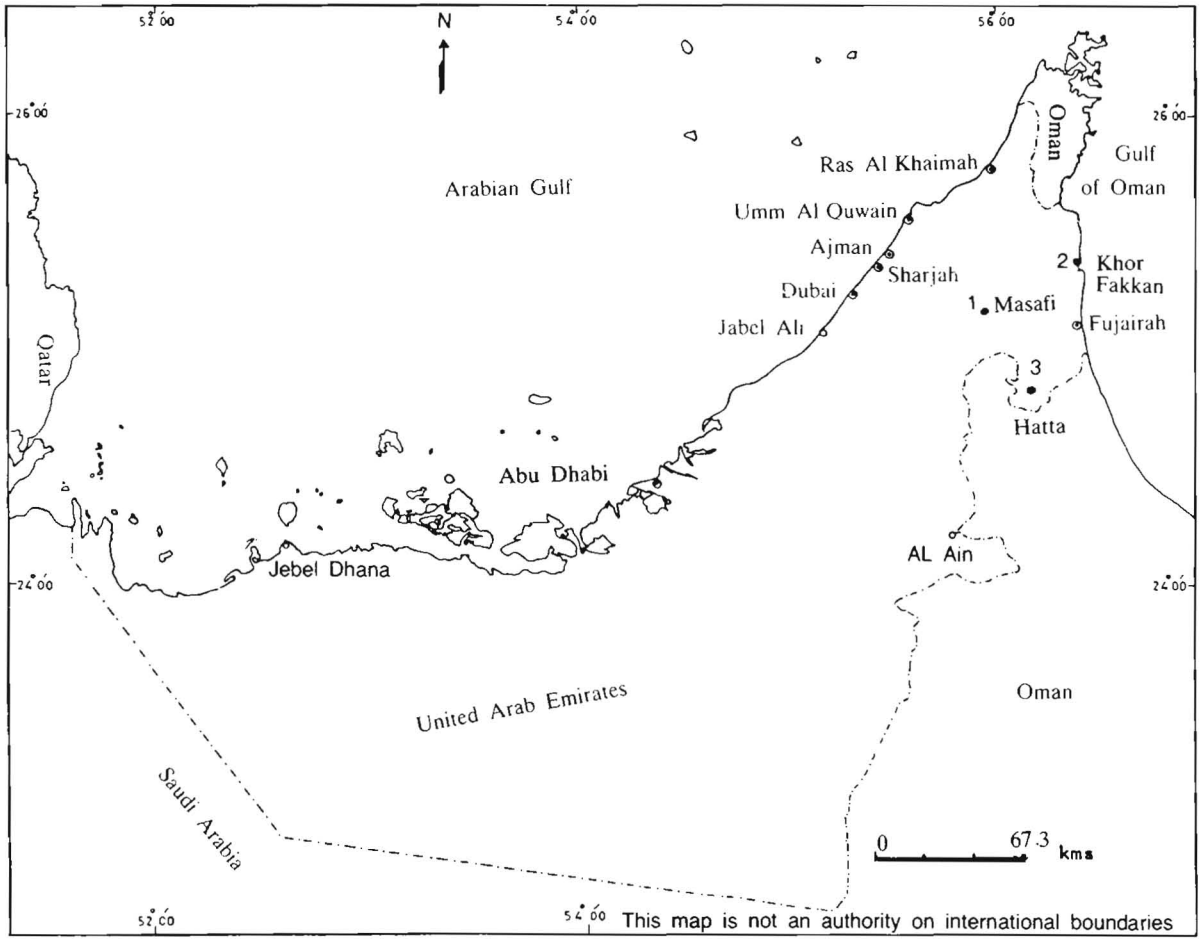

Fig. 1. United Arab Emirates map showing; Three districts: 1. Masafi, 2. Khor Fakkan, 3. Hatta

Campanulaceae

3. *Campanula erinus* L.

General distribution : Mediterranean area, North Iraq, Iran, Transcaucasia West Turkey, Southwest and Southeast Anatolia Islands (Davis 1978), Syria, Palestine and Lebanon (Post and Dinsmore 1932-33), Jordan (Al-Eisawi 1982).

Local distribution : (fl.) Khor Fakkan, Jebel Wadishi 140 m, on hill side, among rocks 25-2-1992, F.M. Karim, 6763.

Cuscutaceae

4. *Cuscuta chinensis* Lam.
Syn.: *Cuscuta ciliaris* Hohenacker

General distribution : It is a chinese origin weed, mostly distributed from Abyssinia, Sokotra, Afghanistan, Iran, Ceylon, India to Australia (Bhandari 1978), Qatar (Batanouny 1981), Iraq (Karim 1978 and Al-Rawi 1968).

Local distribution : (fl. and fr.). 10 km. North Masafi, 520 m, on road side farm, 20-5-1991, F.M. Karim 8057.

Geraniaceae

5. *Monsonia heliotropiodes* (Cav.) Boiss.
Syn.: *Geranium heliotropiodes* Cav.

General distribution : Jordan (Al-Eisawi 1982), Oman (Miller and Morris 1988), Qatar (Batanouny 1981), Pakistan and India (Bhanderi 1978), Saudi Arabia (Collenette 1985).

Local distribution : (fl. and fr.). Hatta district, 280 m, on hill side, sandy gravelly soil, 14-3-1990, F.M. Karim 5762.

Moraceae

6. *Ficus johannis* Boiss.
Syn.: *Ficus persica* Boiss.

General distribution : This species distributed throughout Africa, Australia and Asia (found in Middle East regions *e.g.* Iraq and Iran) (Zohary 1973). Also found in Oman (Ghazanfar 1992).

Local distribution : Very rare in UAE. Khor Fakkan, Jebel Wadishi 160 m, on hill side, among rocks, 25-2-1992, F.M. Karim 6828.

Papaveraceae

7. *Papaver decaisnei* Hochst. et Steud. ex Elkan

Syn.: *Papaver dubium* L. var. decaisnei (Hochst. and Steud. ex Boiss.) Elkan ["Papaver aff. rogersii" sensu Blakelock in Kew Bull. 3:381 (1948).]

General distribution : Jordan, Sinai, Egypt, Iraq, Saudi Arabia, Iraq, Pakistan, Afghanistan (Townsend and Guest 1974-1980).

Local distribution : Very rare in UAE. (fr.). Masafi district, Wadi Siji 200 m, among rocks 24-3-1990, F.M. Karim 6881.

Plantaginaceae

8. *Plantago albicans* L. (Fig. 2)

General distribution : Jordan, Egypt (North Sinai) (Zohary 1973), Iraq (Al-Rawi 1968), Bahrain (Cornes and Cornes 1989), Kuwait (Daoud and Al-Rawi 1985), Oman (Miller and Morris 1988) and Saudi Arabia (Collenette 1985 and Migahid 1978).

Local distribution : (fl. and fr.) Hatta district, 280 m, on hill side, sandy gravelly soil, 3-3-1992, F.M. Karim 6819.

Polygonaceae

9. *Rumex conglomeratus* Murr.

General distribution : A native of Europe is a moisture-loving weed, found in southern Arizona, U.S.A. (Parker 1990). Also found in Iraq (Al-Rawi 1968), Jordan (Al-Eisawi 1982) and Saudi Arabia (Collenette 1985).

Local distribution : (fr.). 10 km. North Masafi, 520 m, on road side farm, 20-5-1991, F.M. Karim 6727.

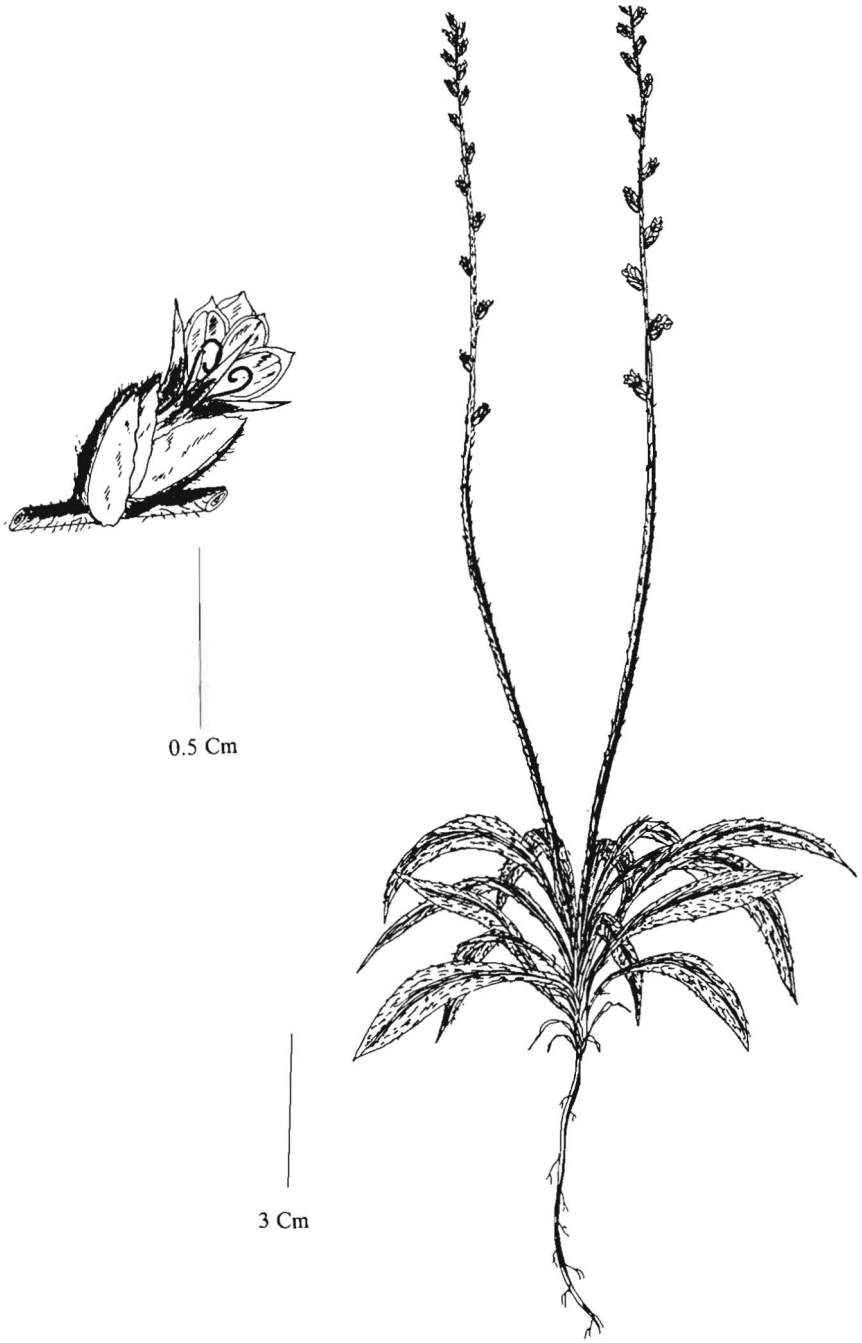

Fig. 2. *Plantago albicans*

Solanaceae

10. *Solanum surratense* Burm.f. (Fig. 3)
Syn.: *Solanum virginianum* L., *Solanum xanthocarpum* Schard and Wendl. *Solanum diffusum* Roxb.

General distribution : It is an American origin distributed throughout Southeast Asia, Malaysia, Tropical Australia, Polynesia, Pakistan, Ceylon, India (Bhandari 1978). Also found in Saudi Arabia (Collenette 1985).

Local distribution : (fl. and fr.). Hatta district, 280 m, on road side, 25-9-1990, F.M. Karim 1624.

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Fig. 3. *Solanum surattense*

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بعض أنواع النباتات التي وُجدت حديثاً في نبيت دولة الامارات العربية المتحدة

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مركز بحوث الصحراء والبيئة البحرية ـ جامعة الامارات العربية المتحدة
العين ص.ب: ١٧٧٧٧ ـ دولة الامارات العربية المتحدة

يشتمل المسح الميداني لنباتات دولة الامارات العربية المتحدة ـ والذي يقوم به المعشب الوطني (التابع لمركز بحوث الصحراء والبيئة البحرية، جامعة الامارات العربية المتحدة) على جمع نماذج نباتية مختلفة من جميع مناطق الدولة وذلك لمعرفة وحصر جميع الأنواع النباتية البرية والمتواجدة على أرض دولةالامارات العربية المتحدة ومن ثم تعريفها وتقسيمها إلى العوائل التي تعود إليها وحفظها في ملفات خاصة تُوضع في خزائن المعشب ـ حيث تمت عدة زيارات ميدانية وخاصة في فصل الربيع في الفترة (١٩٩٠م ـ ١٩٩٢م) إلى المناطق التالية: منطقة مسافي، منطقة حتا، ومنطقة خورفكان الواقعة ضمن المنطقة الشمالية الشرقية في دولة الامارات العربية المتحدة والقريبة من الحدود العمانية (شكل ١)، تتمتع هذه المناطق بطوبوغرافية متميزة، حيث الجبال الشاهقة والصخور الكبيرة والصغيرة ذات ألوان وأنواع مختلفة، ومن المعروف أن تربة هذه المنطقة خصبة وجيدة وذات رطوبة وأمطار مناسبة لنمو الغطاء النباتي بصورة ممتازة. ولقد وُجد حديثاً في هذه المناطق المذكورة أعلاه عشرة أنواع جديدة من النباتات البرية المختلفة والتي لم تكن مجموعة أو معروفة أو مسجلة سابقاً في نبيت دولة الامارات العربية المتحدة هذه الأنواع تعود إلى تسع عوائل نباتية مذكورة في متن البحث.