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# **NOTES ON THE WEED FLORA OF BEDUIN GARDENS IN NORTHEASTERN SINAI**

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# NOTES ON THE WEED FLORA OF BEDUIN GARDENS IN NORTHEASTERN SINAI

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Of the 50 species (from 17 families), five are new to the territory of the Students' Flora of Egypt (5), viz., Bromus sterilis, Conyza canadensis, Euphorbia aleppica, Senecio joppensis and Silene modesta. Five other species are reported for the first time from Egypt's Mediterranean coastal region.

Within the framework of a comprehensive study of floristic and vegetational changes in newly established Israeli settlements in the Rafiah salient (A. Weinstein, unpublished), investigations were conducted on the weed flora of Beduin gardens in the palm groves of El Arish (31° 07' N, 33° 48' E) and Yamit (31° 16' N, 34° 10' E). The climate is attenuated subdesertic (6). The groves are planted on coastal dunes with a high water table; gaps are prepared for growing vegetables and fruit trees\*\* by removal of the top sand layer and leveling, and protected against encroaching sand by dry reed fences. Irrigation is from shallow wells.

The flora of Beduin gardens was examined in May 1979 at El Arish (4 plots), and in June 1979 and April 1980 at Yamit (11 and 17 plots, respectively). Because of intensive cultivation and weeding only few species were found - 19 in El Arish, and 30 and 18, respectively, in April and June at Yamit. Species present in more than 40% of the plots were: Senecio desfontainei (75%) and Trisetaria koelerioides (50%) at El Arish; Chenopodium album (65%), Setaria verticillata (59%), Urtica pilulifera (59%), Medicago polymorpha (53%), Sonchus oleraceus (47%), Solanum nigrum (47%), Amaranthus graecizans (41%) and Corynephorus divaricatus (41%) in April at Yamit;

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\*\* In the plots examined, there were chili pepper, cucumber, eggplant, garden bean, green pepper, onion, purslane, and tomato at El Arish; and alfalfa, banana, corn, cucumber, dill, eggplant, garlic, green pepper, guava, onion, potato, squash, tomato and watermelon at Yamit.

and A. graecizans (54%), C. album (45%), Portulaca oleracea (45%) and S. nigrum (45%) in June at Yamit.

Bromus sterilis, Conyza canadensis, Euphorbia aleppica, Senecio joppensis and Silene modesta are new to the territory covered by the Students' Flora of Egypt (5), their presence at Yamit - 7 km west of the international boundary - being the result of westward migration (or transport) from Israel. Species recorded for the first time in Egypt's Mediterranean coastal region or the Sinai coast which may have reached El Arish from the Isthmic Desert or the Sinai mountains (5), are Chenopodium album, Hyoscyamus desertorum and Rumex cyprius; the occurrence at Yamit of C. album and Senecio vernalis could be the result of northward and/or westward migration (or transport), respectively, from the Isthmic Desert or Israel; while that of Amaranthus retroflexus is clearly an extension of its area in Israel.

Species occurring as weeds in gardens and orchards of the Sinai mountains (3) are marked with an asterisk. The abbreviations used below are as follows:

AR, El Arish

Di, Isthmic Desert

M, Mediterranean coastal region of Egypt

Mp, Sinai coast

S, Sinai mountains

YA, Yamit

iv, April

vi, June

#### AIZOACEAE

Mesembryanthemum crystallinum L. - AR.

#### AMARANTHACEAE

Amaranthus albus L. - YA (vi).

A. gracilis Desf. (A. viridis L.) - AR, YA (vi).

A. graecizans L. - AR, YA (iv, vi).

A. retroflexus L. - YA (iv, vi). Not reported from M, very rare in Egypt (5). Common everywhere in Israel (7).

## CARYOPHYLLACEAE

Silene modesta Boiss. et Bl. - YA (iv). Not listed by Täckholm (5).

Common on sandy soils of the Philistine (Pleshet) Plain and elsewhere in Israel (7). Collected near Gaza already by Bornmüller (4), but not reported by Boulos (1).

S. viyianii Steud. (S. setacea Viv.) - YA (iv).

Spergularia media (L.) C. Presl - YA (iv).

## CHENOPODIACEAE

\*Bassia muricata (L.) Aschers.- AR.

Chenopodium album L.- AR, YA (iv, vi). Not reported from Mp, but common in D1 and S (5). A common weed in Israel (7).

C. ambrosioides L.- AR, YA (iv, vi).

\*C. murale L.- YA (iv).

\*C. vulvaria L.- YA (iv).

Salsola kali L.- YA (iv, vi).

## COMPOSITAE

\*Conyza bonariensis (L.) Cronquist (C. linifolia (Willd.) Täckh.) -  
- YA (iv).

C. canadensis (L.) Cronquist - YA (iv, vi). Not listed by Täckholm (5). Not recorded from the Gaza region by Boulos (1), but collected there by Danin (2). Very common everywhere in Israel (7).

Launaea tenuiloba (Boiss.) O. Kuntze - AR.

\*Senecio desfontainei Druce - AR.

S. joppensis Dinsm. (S. vernalis var. carnosus Post) - YA (iv). Not listed by Täckholm (5). Common on maritime sands of the Philistine (Pleshet) Plain and elsewhere in Israel (7); collected by Samuelsson at Deir al Balah in the Gaza region (4) but not reported by Boulos (1).

S. vernalis Waldst. et Kit.- YA (iv). Not reported from Mp, very rare in D1 (5). Very common throughout Israel (7).

\*Sonchus oleraceus L.- YA (iv, vi).

## CYPERACEAE

Cyperus conglomeratus Rottb.- YA (vi).

C. laevigatus L. - YA (iv).

## EUPHORBIACEAE

Euphorbia aleppica L.- YA (vi). Not listed by Täckholm (5). Fairly common as a weed in the Philistine (Pleshet) Plain and elsewhere in Israel (7).

E. peplis L.- AR.

\*E. peplus L.- YA (iv, vi).

## GRAMINEAE

Agropyrum junceum (L.) P. Beauv. (Elymus farctus (Viv.) Runem. ssp. junceum Runem.) - AR.

\*Avena sterilis L.- AR. In Sinai ssp. ludoviciana (Dur.) Gillet et Magne (3).

Bromus rigidus Roth - AR, YA (iv).

B. sterilis L.- YA (iv). Not listed by Täckholm (5). Very common in ruderal habitats in most of Israel.

Corynephorus divaricatus (Pourr.) Breistr.- YA (iv).

Cutandia memphitica (Spreng.) Benth.- YA (iv).

\*Hordeum leporinum Link - AR.

H. marinum Huds.- YA (iv).

\*Lolium rigidum Gaudin - AR.

Poa annua L.- AR.

\*Setaria verticillata (L.) P. Beauv.- YA (iv, vi).

Trisetaria koelerioides (Bornm. et Hack.) Täckh.- AR.

## JUNCACEAE

Juncus maritimus Lam. (J. rigidus C.A. Mey.) - YA (vi).

## LEGUMINOSAE

Medicago polymorpha L.- YA (iv).

Trigonella arabica Del.- YA (iv).

## LILIACEAE

Urginea maritima (L.) Baker - YA (vi).

## MALVACEAE

Malva aegyptia L. - AR.

M. parviflora L. - YA (iv).

## POLYGONACEAE

Rumex cyprius Murb. - AR. Common in Di and S, not reported from Mp (5).  
Very common in the Philistine (Pleshet) Plain and elsewhere in Israel (7).

## PORTULACACEAE

\*Portulaca oleracea L. - YA (iv, vi). Also as a vegetable in AR.

## PRIMULACEAE

\*Anagallis arvensis L. - YA (iv).

## SOLANACEAE

Hyoscyamus desertorum (Aschers. ex Boiss.) Täckh. - AR. Rare in Di and S, not reported from Mp (5). Locally common in the Negev of Israel (7).

\*Solanum nigrum L. ssp. nigrum - YA (iv, vi).  $2n = 72$  (Clara Grunwald, unpublished).

## URTICACEAE

Urtica pilulifera L. - YA (iv, vi).

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מינהל המחקר החקלאי  
המחלקה לחקר היער

## עשבים רעים בבוסתני בדואים בצפון-מזרח סיני

א' ויינשטיין, ר' קרשון

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בשנת 1979/80 נערכו בחולות אל-עריש וימית סקרים על העשבים הרעים שבבוסתני בדואים הסמוכים למסעי תמרים. נרשמו חמישים מינים המתפלגים ל-17 משפחות, ובהם חמישה מינים שלא צוינו ב"מגדיר לצמחי מצרים" (5): ברומית עקרה, פלגית קנדית, חלכלוב ארס-צובא, סביון יפו וציפרנית חופית. כמו כן נרשמו לראשונה חמישה מינים נוספים המצויים בחוף הים-תיכוני של חצי האי סיני.