

This species belongs geographically to the light soils of the maritime plain. It is characteristic for the associations of *Eragrostion* and also for the *Thymus capitatus-Andropogon hirtus* association of *Poterion*. It seems that even in this last association *P. amalecitana* finds its optimum of development. Ecologically then this species is clearly transitional to *P. intermedia* and also morphologically (as shown above).

The specimen of Rishon-le-Zion (1922) named by SAMUELSSON *H. galilaea*, belongs to this species, although in the form of the cauline leaves it resembles *P. galilaea*. The same is true of the specimen of Benyamina (1922).

***Picris intermedia* Eig sp. nov.**

Figs. 5, 7.

(*Picris polymorpha* sp. nov. in Herb.)

— Annuā, caulis striatus a basi vel altius divaricatim \pm ramosus, (5)7—15 (25) cm. longus, cum foliis et involucri phyllis pilis patentibus, saepe glochidiatis, hirtus. Folia sinuato-denticulata vel sinuato-runcinata, radicalia oblongo-lanceolata, \pm longo-petiolata, 4-8 cm. longa; caulina diminuta, sessilia, \pm auriculata. Pedunculi non incrassati, capitulis 2—5 plo longiores. Capitula erecta, mediocria, fructifera \pm constricta. Involucri phylla exteriora pauca, minuta, lanceolato-lineararia, interiorum, 1/4 aut 1/5 longitudinis attingentia. Phylla interiora ca. 1 cm. longa, lanceolato-lineararia, acuta, herbacea, albo-carinata, fructifera valde accreta. Flores lutei, involucre longiores. Achaenia dimorpha, 5 mm. longa, maturissima fusco-brunnea; exteriora persistentia, subincurva, adpresse hirta, inconspicue striata et transverse rugosa, cupula fimbriata superata; interiora glabra, subteliter striata et transverse rugosa, breviter rostrata in pappum 6-7 mm. longum abeuntia; pappus persistens, albus, setis 5 (rarissime 6-7) plumosis, basi dilatatis.

PALESTINE: Negeb: N of Beersheba and betw. Beersheba a. Dahariyeh (1934 *EZF*). Southern Judean Desert: Bir Rotmeh (1934 *F*). Middle Judean Desert and E of Jerusalem: Kefar Ivri (1934 *EF*), Sheikh-Anbar, E. of Mt. Scopus (1935 *EZG*), 8, 9 a. 11 km E of Jerusalem (1934), betw. km 15-16 and 18-19 E of Jerusalem (1935), Ain Fuar, (1935—all *EZF*), Han Hatrur (1935 *EZ*), Wadi Kelt (1930 *A*), 24 km E of Jerusalem towards Jericho (1935 *EZG*). Lower Jordan Valley: 10 km N of Jericho (1934), Jericho (1927—both *EZF*), Wadi Zerka Main (1930 *Z*). Transjordania: Gilead and Belka: ascent to es-Salt (1927 *EZF*), es-Salt (1929 *EZ*), Mejdal (1929), Wadi Waran (1927), ruines of Tmeira (1927—all *EZF*).

The nearest species are on the one hand *P. amalecitana* and on the other *P. damascena*.

An endemic species, whose centre of distribution is the Irano-Turanian territory of the Judean Desert. Its area reaches the Mediterranean territory in Kefar Ivri in Western Palestine and Mejdal and Wadi Waran in Gilead. In general it seems to penetrate wider into the Mediterranean territory of Transjordan than into the Mediterranean territory of Cisjordan. In Transjordan it is met with in Gilead and in Belka. It is completely absent in Moab. In the Southern part of Cisjordan it is met with on the borders of the Judean Mountains and the plain of Beersheba.

***Pieris intermedia* Eig var. *decidua* var. nov.**

Pappus achaenii disci deciduus.

PALESTINE: Judean Desert and Lower Jordan Valley: Wadi Kelt (1935 EZG). Jordan Valley: betw. Jericho and Dead Sea (1935 EZF).

It is rare form found only on the edge of the Saharo-Sindian territory of the Judean Desert, where it touches the area of *P. damascena*. This form, then, is a clear transition to *P. damascena* (hybrid?).

***Pieris damascena* Boiss. et Gaill.—Fl. Orient. 3:740 (1875)**

[incl. *P. blanchena* Boiss.]

Figs. 6, 8.

PALESTINE: Southern Judean Desert: Env. of Bene Naim (1934), betw. Tekoa and Ain Gedi (1934—both EZF), Hirbeth-el-Mird (1932 EF). Middle Judean Desert: Env. of Ain-Fuar (1935 EZG), Wadi Kelt, (1932), 26 and 27 km of Jerusalem towards Jericho (1935—both EZ), 31 km of Jerusalem towards Jericho (1935 EFZ). Lower Jordan Valley: E of Allenby Bridge (1929 EZ), betw. Wadi Derajeh and Ras-Fashkha, betw. Wadi Sukf and Wadi Sidr; betw. Bir-Ghuweira and Wadi Sukf (1926—all EZF), Wadi Umbaghag, (1929 *Gabrielith*). Southern Transjordan: Amman (1929 EZ), El-Monakr-el-Karame (1927 EZF), Wadi-el-Hasa, near Qal'at-el-Hasa (1926), betw. Wadi-el-Hasa and 'Aneze (1929—both EZ). SYRIA: 21 and 34 km SW of Damascus (1933 EZ).

In Syria it is rather an Irano-Turanian species, but in Palestine, especially in comparison with *P. intermedia*, it is a Saharo-Sindian species. Thus its whole area is a Saharo-Sindian—Irano-Turanian one. In Palestine it is common in the Eastern (Saharo-Sindian) part of the Judean Desert, around the Dead Sea, the plain of Jericho and in Transjordan in Edom. In Belka it is found in the more arid part (betw. el-Muwaqqar and el-Kharana).

Besides the type we distinguish the following varieties:

***Pieris damascena* Boiss. et Gaill. var. *persistens* var. nov.**

Pappus achaenii disci persistens.

PALESTINE: Judean Desert and Lower Jordan Valley: Hirbet-el-Mird (1932), 26 km. E of Jerusalem towards Jericho (1935—both EZ), Wadi Nemrin, East of Allenby Bridge (1936 EZF).

The specimen of Petah-Tikva (1927 *Harlev*), named by SAMUELSSON¹ *H. amalecitana*, is certainly *P. galilaea*. The specimen of Tel-Arad (1922 *E*), named also by SAMUELSSON *H. amalecitana*, is probably *H. galilaea*, according to the form of the outer akenes. But the narrow stem leaves and the bracts are typical of *H. amalecitana*. Also according to the locality it is rather *H. amalecitana*. So the determination of this specimen is a matter of doubt.

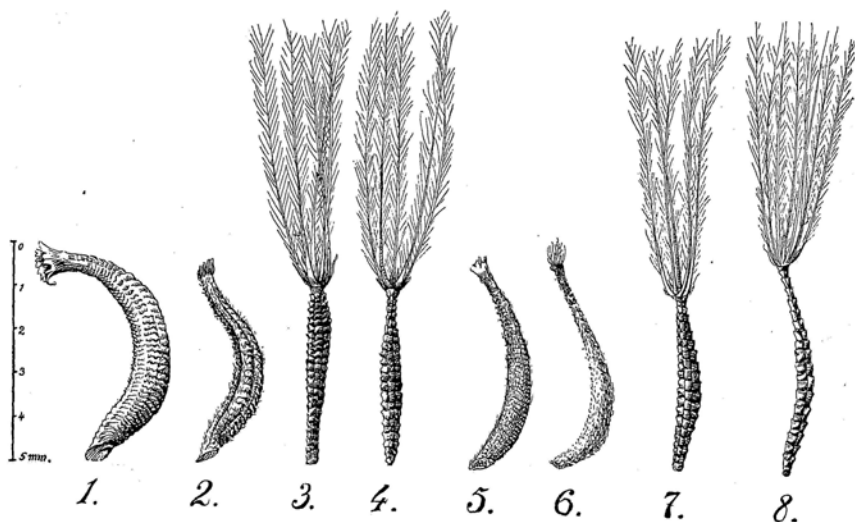
***Picris amalecitana* (Boiss.) Eig comb. nov.**

Figs. 2, 4.

Syn. *Hagioseris amalecitana* Boiss.—Diagn. Plant. Orient. Nov. I, 11: 35 (1849).

PALESTINE: Coastal Plain: Ruhama (1928 *EZF*), Gaza (1922 *E* and *Faktorovsky*), betw. Barbara and Deir-Snid (1927 *EZF*), Gan Yavneh (1937 *EZG*), Gedeira (1937 *EZG*), Beer Ya'akov (1922), Rishon-le-Zion (1922), Tel-Aviv (1922—all *E* and *Faktorovsky*), Bne Barak (1925 *E*), Ein Hai (1925 *E*), betw. Herzlia and Arsuf (1926 *Z*), Nahar-el-Falik (1927 *EZF*), Hedera (1927 *Smoly*), Benyamina (1922 *E* and *Faktorovsky*).

¹ G. SAMUELSSON revised the material on *Hagioseris* of the Herbarium of the Hebrew University. He also restored *Hagioseris amalecitana*, but unfortunately confused it with *P. intermedia* sp. n.



Figs. 1—8. Fig. 1. *Picris galilaea*, Mt Carmel, Apr. 23, 1927. Fig. 2. *P. amalecitana*, Env. of Gedeira, June 14, 1937. Fig. 3. *P. galilaea*, Nazareth, Apr. 19, 1929. Fig. 4. *P. amalecitana*, Nahar-el-Falik, Apr. 4, 1927. Fig. 5. *P. intermedia*, 10 km. N of Jericho, March 30, 1934. Fig. 6. *P. damascena*, Judean Desert, 31 km. of Jerusalem towards Jericho, March 23, 1935. Fig. 7. *P. intermedia*, Jericho, Apr. 5, 1927. Fig. 8. *P. damascena*, Judean Desert, 31 km. of Jerusalem towards Jericho, March 23, 1935.