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TWO NEW SPECIES OF APHIDS (HOMOPTERA ; APHIDIDAE) FROM MAHARASHTRA, INDIA

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ABSTRACT

Two new species of aphids viz. *Dactynotus orientalis* and *Dactynotus echinatus* from Maharashtra, India, are described and figured.

1. **Dactynotus orientalis** sp. nov.

Apterous viviparous ♀ : Body 3.40-3.81 mm. long, (Table 1) with maximum width being 1.91-2.04 mm. Head (Fig. 1A) brown, smooth, with well developed, diverging frontal tubercles ; dorsum of head with four long hairs with acute apices, longest one being 50 μ. Antennae 0.83-0.90x body ; segments I and II brown, darker than head, base of segment III paler than the rest of the dark brown flagellum. Antennal segment III (Fig. 1B) smooth, with 34-47 small slightly protuberant secondary rhinaria distributed over its basal 0.75 portion, segment IV smooth, V weakly wrinkled, rest of the flagellum feebly imbricated throughout ; processus terminalis (Fig. 1C) 6.00-6.90 x base of the segment ; flagellar hairs acute, longest hair on segment III about 0.75 x its basal diameter. Rostrum dark brown, reaches hind-coxae ; ultimate rostral segment (Fig. 1D) 1.10-1.20 x second segment of hind tarsi, with three pairs of secondary hairs. Mesothoracic furca (Fig. 1E) with a distinct stalk. Legs with coxae, very base and apical 0.66 portion of femora, apical 0.20 portion of tibiae dark brown, rest pale. First tarsal chaetotaxy 4, 4, 4 or 4, 5, 4.

Abdomen pale, post siphuncular sclerite well developed, antesiphuncular sclerite absent. Dorsal hairs (Fig. 1G) on small sclerotic bases, with acute apices, longest hair on anterior tergites about 1.00-1.40 x basal diameter of antennal segment III. Siphunculi (Fig. 1H) long, cylindrical, dark brown, imbricated throughout, with polygonal reticulations extending over its apical 0.30 portion ; 0.28-0.30 x body length and 2.00 x cauda. Cauda (Fig. 1F) brown, conical and pointed at apex, with 13-16 small, acute hairs.

Holotype : Apterous viviparous ♀, India, Maharashtra, Dist. Aurangabad, Vill. Satara ; 31. x. 1971, from *Carthamus tinctorium* L. Coll. *P. P. Kulkarni.*

Paratypes : Three apterous viviparous ♀♀ data as in holotype.

Remarks : This species resembles *Dactynotus compositae* Theobald, but differs from it in having i. fewer number of secondary rhinaria and shorter hairs on antennal segment III ; ii. longer siphunculi with

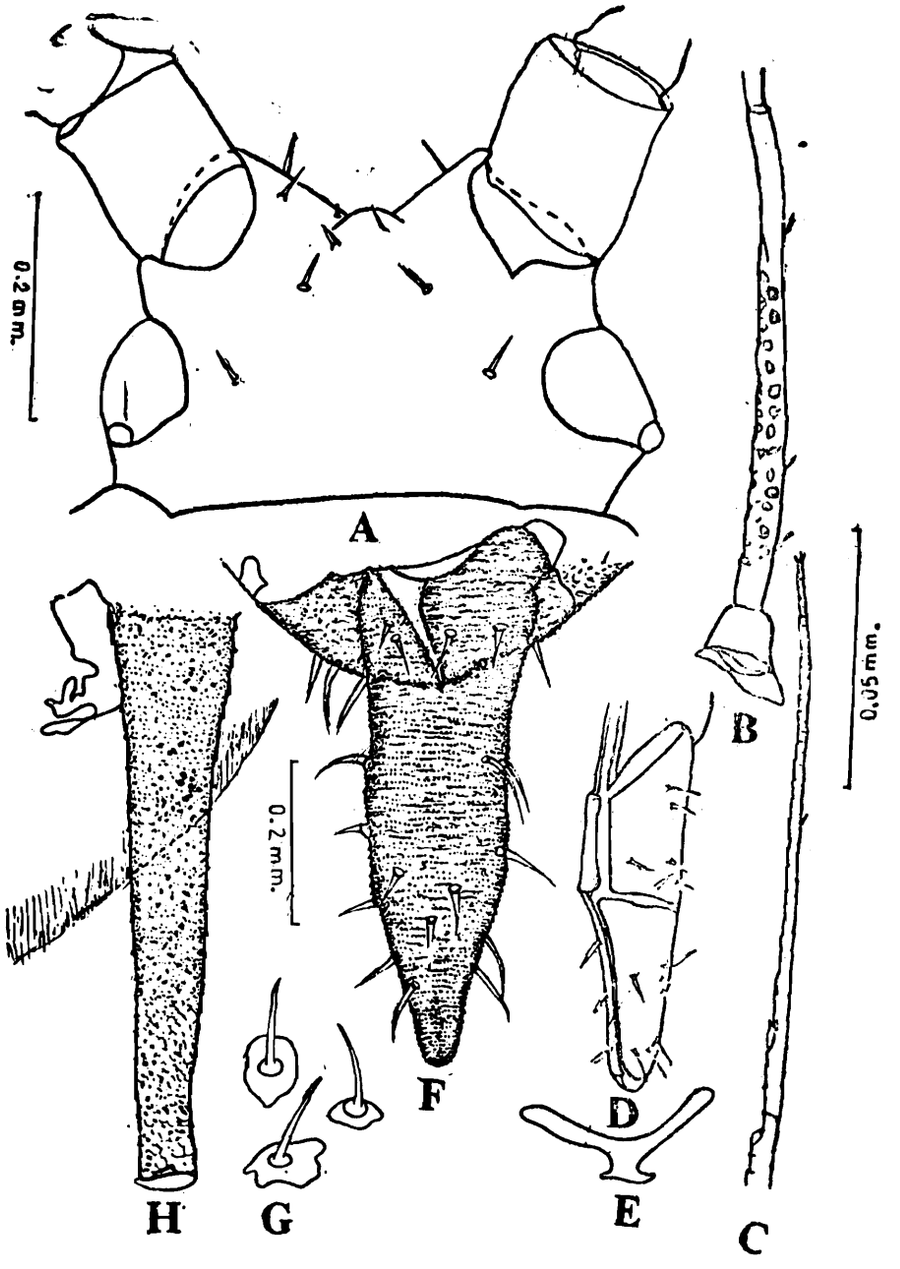

Fig. 1. *Dactynotus orientalis* sp. nov. Apterous viviparous ♀, A—Head, B—Antennal segment III, C—Processus terminalis, D—Ultimate rostral segment, E—Mesothoracic furca, F—Cauda, G—Dorsal abdominal hairs, H—Siphunculus.

Table 1. Measurements (in mm.) of the specimens worked out in detail.

Name of the species	Morph	Body Length	Body Width	antennal segments III	IV	V.	VI	U.R.S.	Second Joint of hind tarsus	Siphunculus	cauda
Dactynotus orientalis Sp. nov.	Apterous viviparous ♀	3.40	1.95	0.92	0.45	0.50	(0.13+ 0.82)	0.16	0.14	1.11	0.56
Dactynotus echinatus sp. nov.	Apterous viviparous ♀	2.97	1.39	0.85	0.41	0.36	(0.14+ 0.93)	0.16	0.12	0.83	0.45
,,	Alate viviparous ♀	2.42	0.93	0.72	0.39	0.33	(0.12+ 0.89)	0.16	0.12	0.65	0.33

apical 0.33 portion reticulated. This species also shows close resemblance to *Dactynotus simillis* Hille Ris Lambers (1938, 1939) but differs from the same in having shorter

Apterous viviparous ♀ : Body 2.30-2.97 mm. long (Table 1), with its maximum width being 1.20-1.39 mm. Head (Fig. 2A), brown, smooth, with well developed diverging frontal

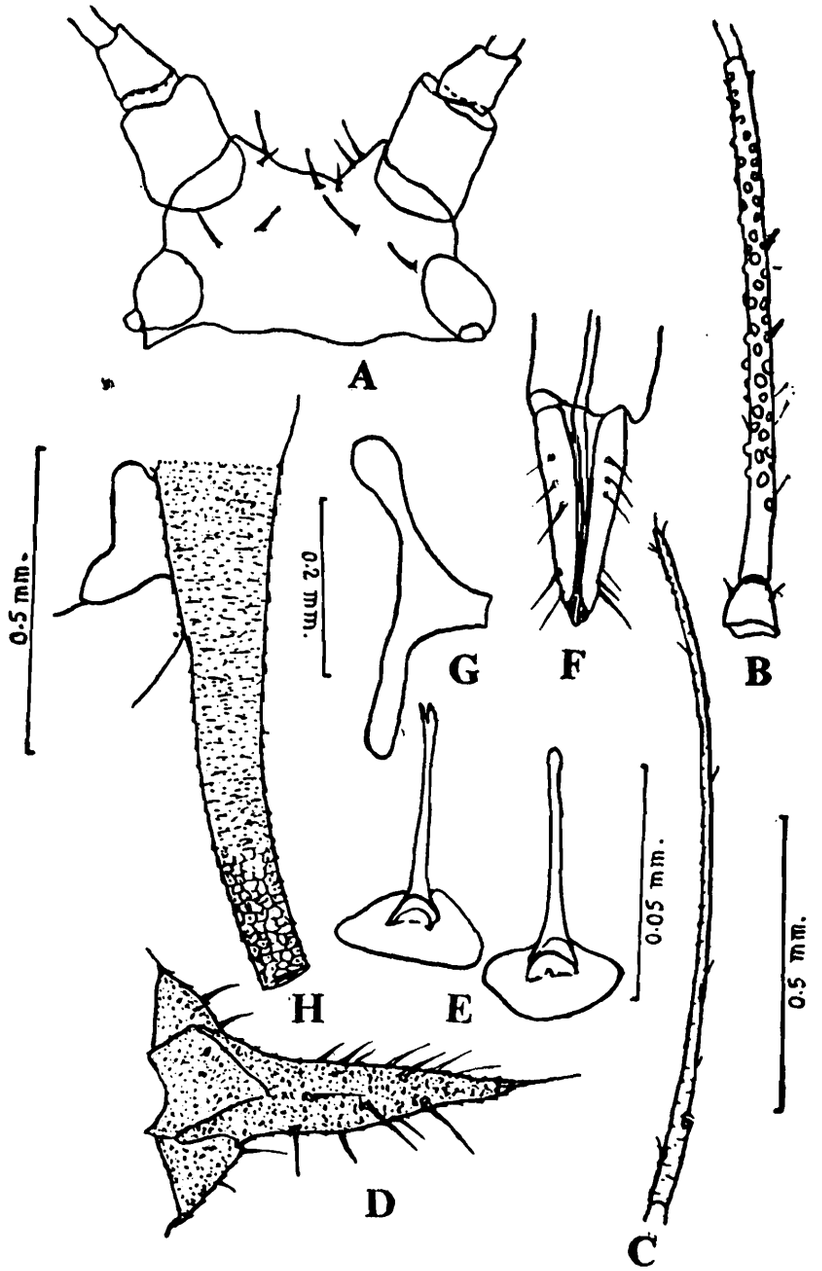

Fig. 2. *Dactynotus echinaius* sp. nov. Apterous viviparous ♀, A—Head, B—Antennal segment III, C—Processus terminalis, D—Cauda, E—Dorsal abdominal hairs, F—Ultimate rostral segment, G—Mesothoracic furca, H—Siphunculus.

antennae, longer processus terminalis and having shorter hairs on dorsum of abdomen.

2. **Dactynotos echinatus** sp. nov.

tubercles. Dorsum of head with eight long hairs having blunt to furcated apices, longest one being 72 μ. Antennae 0.95-1.20 x body ; segments I and II dark brown, darker than

head, base of segment III slightly paler than rest of the dark brown flagellum. Antennal segment III (fig. 2B) smooth, with 65-70 slightly protuberrent secondary rhinaria of varying size having distributed throughout the segment except basal 0.20 portion ; segment IV smooth weakly wrinkled, V smooth and deeply wrinkled, processus terminalis (Fig. 2C), 6.00-6.30 x base of the segment ; flagellar hairs thick, with furcated or blunt and expanded apices, longest hair on segment III about 1.00 x its basal diameter. Rostrum dark brown, long, extending beyond hind-coxae, ultimate rostral segment (Fig. 2F) 1.10-1.20 x second segment of the hind tarsus, with four pairs of

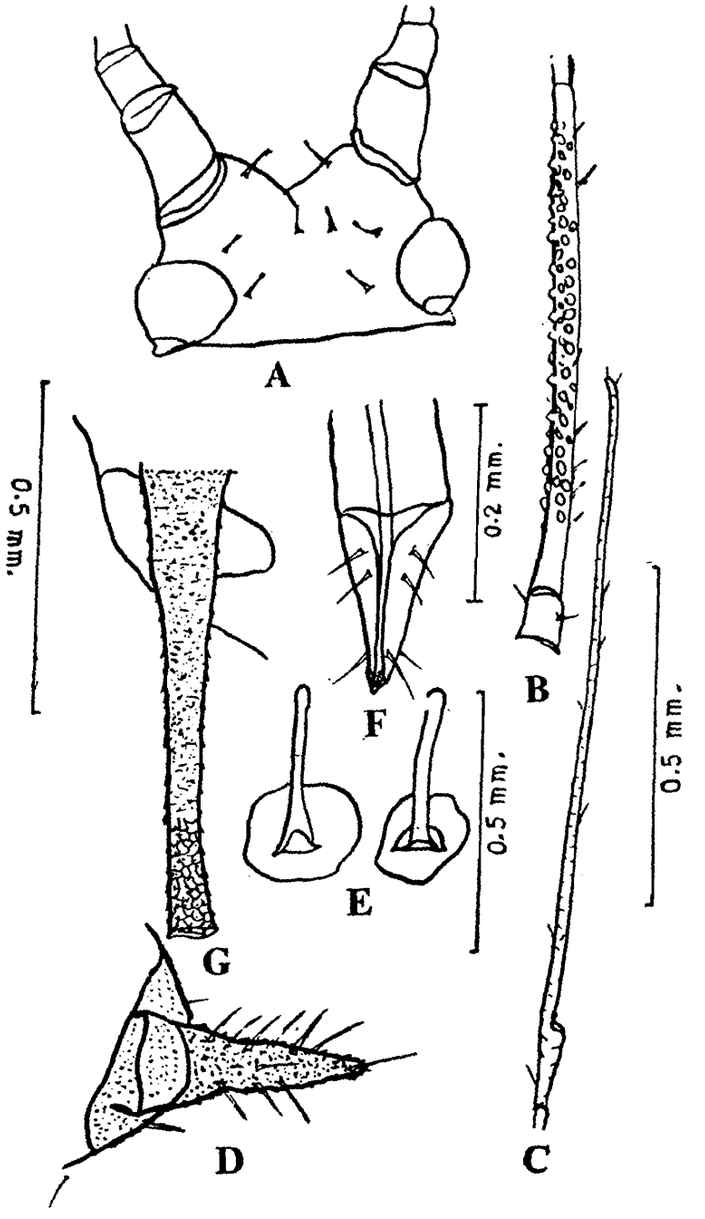

Fig. 3. *Dactynotus echintus* sp. nov. Alate viviparous ♀, A—Head, B—Antennal segment III, C—Processus terminalis, D—Cauda, E—Dorsal abdominal hairs, F—Ultimate rostral segment, G—Siphunculus.

secondary hairs. Mesothoracic furca (Fig. 2G), with a distinct stalk. Legs with coxae, apical 0.75 portion of femora, extreme base and apical 0.25 portion of tibiae dark brown, rest pale. Hairs on femora and tibiae thick, short, with blunt to slightly furcated apices. First tarsal chaetotaxy 5, 5, 5.

Abdomen pale; post siphuncular sclerite well developed, antesiphuncular sclerite absent. Dorsal hairs (Fig. 2E), on small sclerotic bases. Hairs arranged in a line, twelve on each of the first five abdominal segments. Marginal two hairs of both the sides of the segments form small composit sclerotic plates. The dark sclerites of the VI and VII hair of each segment fuse together to form a distinct spinal row of plates. Rest of the hairs with their independent sclerites. Abdominal segments VI and VII with eight and six hairs respectively. segment VIII with four hairs, longest of these being 72 μ. Longest hair on anterior abdominal tergites being about 1.60-2.40 x basal diameter of antennal segment III. Siphunculi long (Fig. 2H), cylindrical, dark brown, imbricated throughout, with polygonal reticulations extending over apical 0.30 portion ; 0.29-0.31 x body length and 1.90-2.00 x cauda. Cauda (Fig. 2D), brown, conical, pointed at apex, without any constriction, with 13-15 long acute hairs.

Alate viviparous ♀ ; (Fig. 3A-G) Resembles apterous viviparous female except i. number of secondary rhinaria on antennal segment III 100-115 ; those absent on antennal segment IV and V ; ii. processus terminalis 7.60 x base of the segment ; iii. presence of distinct marginal sclerites on abdominal segments 1-7.

Holotype : Apterous viviparous ♀, India, Maharashtra, Aurangabad, Marathwada University campus : 9. i. 197-, Ex. *Echinus echinatus* Raf. Coll. *P. P. Kulkarni.*

Paratypes : Ten apterous and five alate viviparous ♀♀, data as in Holotype.

Remarks : This species can easily be distinguished from all other species of *Dactynotus* Raf. (Olive, 1963 a, b, 1964 ; Miyazaki, 1971 ; Banerjee and Basu, 1969) by i. the presence of blunt to forked apices of the body hairs and their definite pattern of distribution on the dorsum of the abdomen ; ii. longer processus terminalis ; iii. more secondary rhinaria on antennal segment III in alate and their absence on antennal segments IV and V of alate.

All the type specimens are in the collection of the author.

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