

ZYGORIBATULA GRANDJEANI,
A NEW SPECIES OF ORIBATID MITE FROM EGYPT
(ACARI : ORIBATULIDAE)

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TAXONOMY
ORIBATEI
EGYPT

ABSTRACT : *Zygoribatula grandjeani*, a new species collected from soil of tomato at El-Balyana, Sohag Governorate, Upper Egypt, is described and illustrated. A key to the Egyptian species of the genus is also presented.

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RÉSUMÉ : *Zygoribatula grandjeani*, n. sp., récoltée dans un sol à tomate à El-Balyana, Gouvernorat de Sohag, en Haute Egypte, est décrite et figurée. Une clé pour les espèces Egyptiennes de ce genre est également présentée.

Cryptostigmatid mites are found in different habitats such as soil and debris. Many species belonging to the genus *Zygoribatula* Berlese were described from different parts of the world (EWING 1909, 1913 & 1917, BERLESE 1916, JACOT 1929, WILLMANN 1931, HAMMER 1958, 1972 & 1977, WOALLEY 1961 and AOKI and WANG HUI-FU 1986). In Egypt four species belonging to this genus were described (POPP 1960 and EL-BADRY and NASR 1974).

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The present study includes the description of a new species and a key to the Egyptian species.

Genus *Zygoribatula* Berlese

Diagnosis : Pedotectum I well developed, lamellae and translamellae distinct. Notogaster with 13 pairs of setae ; area porosae. Four pairs of genital setae, one pair of aggenital setae, annals two pairs and adanals three pairs, tarsi tridactylous.

KEY TO SPECIES OF EGYPT

1. Translamella weakly sclerotized ; notogaster roughly sculptured *Z. grandjeani* n. sp.
- Translamella heavily sclerotized ; notogaster smooth, or pitted, or striated 2
2. Lamellae distinct along its length, plate-like ; pseudostigmatic organ with clavate head ; notogaster semi-circular 3
- Lamellae distinct anteriorly and reduced posteriorly ; pseudostigmatic organ with spherical or sub-spherical head ; notogaster ovate to elongate in shape .. 4
3. Notogaster with a longitudinal striations medially and an oblique ones laterally.. *Z. sayedi* El-Badry & Nasr
- Notogaster punctate..... *Z. undulata* Berlese
4. Notogaster with longitudinal striations medially ; lamellar setae not set on small condyle..... *Z. tritici* El-Badry & Nasr
- Notogaster smooth, with a transverse suture posterior to fissure (im) ; lamellar setae set on small condyle *Z. tameyeii* El-Badry & Nasr

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Zygoribatula grandjeani n. sp.
(Figs. 1 & 2)

Diagnosis : This species is similar to *Z. undulata* Berlese, *Z. oceana* Hammer, *Z. tortilis* Hammer, and *Z. agavae* Aoki and Wang Hui-Fu, but differs in having one or a combination of the following characters : position and size of areae porosae, length and barbing of prodorsum and notogaster setae, and body dimensions.

Body broadly ovate ($525 \mu\text{m} \times 330 \mu\text{m}$), with tapered anterior end ; colour brown-reddish. Pro-

Notogaster elliptical, roughly sculptured, with multidefficient setal pattern as it bears 14 pairs of barbed setae ; area porosae (Ao) wider than A_1 , A_2 and A_3 , the latters subequal ; suc and fissure normal to the genus.

Ventrally (Fig. 2) apodemata III well-developed, bounding the anterior part of genital plate, while apodemata II and IV moderately developed. Genital dorsum sub-triangular, with transverse line between rostral setae ; rostral, lamellar and interlamellar setae subequal ; all thick and densely barbed ; lamella heavily sclerotized ; translamella weakly formed ; sensillus with subspherical head as long as the stalk and covered with dense fine bristles.

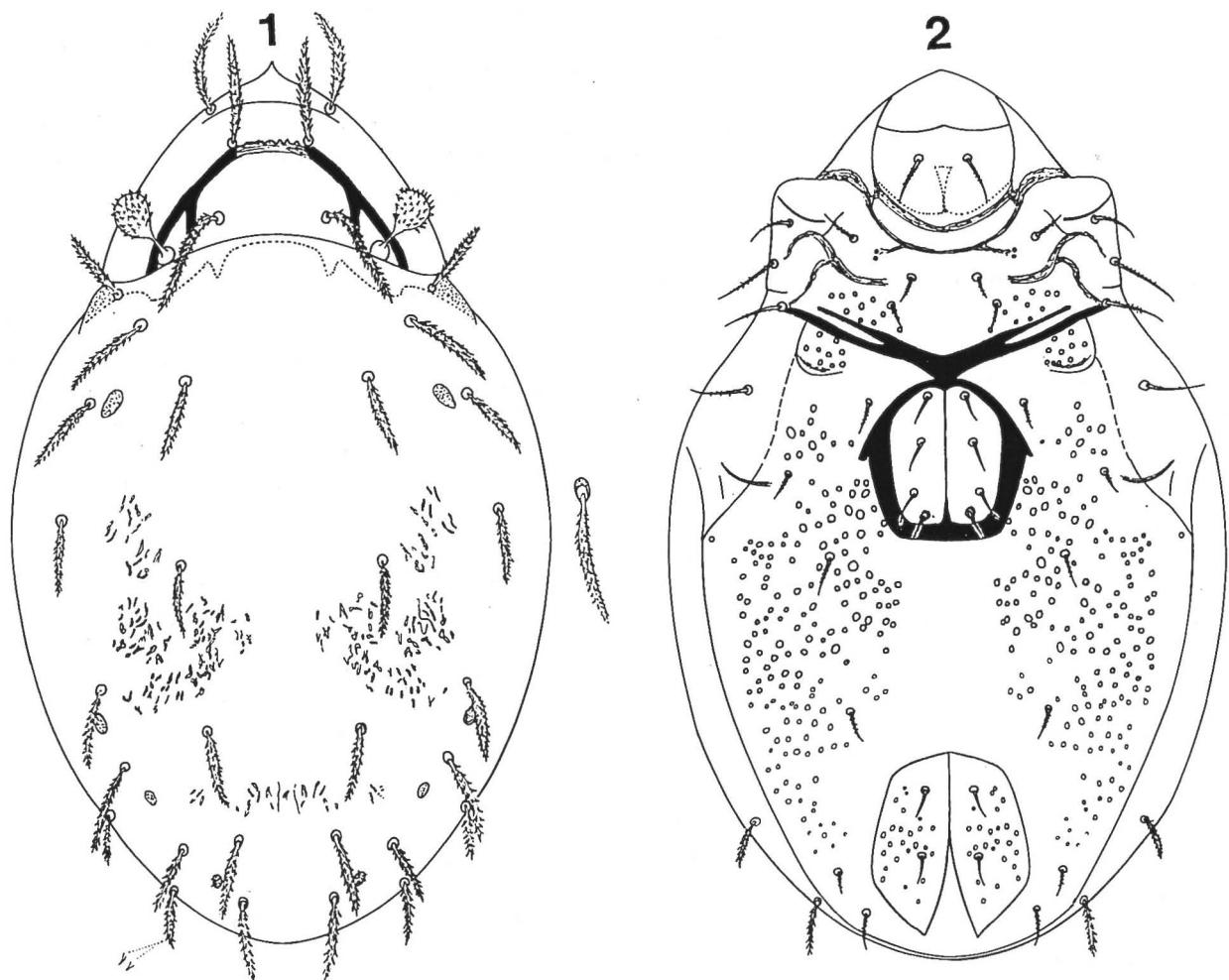


FIG. 1-2 : *Zygoribatula grandjeani* n. sp.
1. — Dorsum. 2. — Venter.

plates ($75 \mu\text{m} \times 61 \mu\text{m}$) with four short pairs of slightly barbed setae. Anal plates ($93 \mu\text{m} \times 84 \mu\text{m}$) with two pairs of short, finely barbed setae ; fissure (ian) situated anterior to anal plates.

Legs : All legs tridactyle. Leg I more robust than, but subequal in length to leg II ; leg IV longest. All setae, except prorals, strongly barbed. Setal and solenidial formulae for legs I-IV are : 1-5-3-4-19 (0-0-1-2-2), 1-5-2-4-15 (0-0-1-1-2), 2-3-1-3-15 (0-0-1-1-0), and 1-2-2-3-12 (0-0-0-1-0), respectively.

REMARKS : Genus *Zygoribatula* in Egypt is represented by four species in addition to the new species *Z. grandjeani* ; the latter is close to *Z. undulata* Berlese in some aspects : prodorsum with anterior projection ; sensilla with sub-spherical head ; lamellar and interlamellar setae thick and densely barbed ; but it differs mainly in lamella and interlamella weakly ridge sclerotized and notogaster roughly sculptured.

HOLOTYPE : One adult individual collected from soil of tomato at El-Balyana, Sohag Governorate and kept in the collection of Faculty of Agriculture, Cairo University.

Paratypes : Two individuals were collected from the same locality.

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