

A NEW SPECIES OF *MULTIOPPIA* (ACARI : CRYPTOSTIGMATA)
FROM ST. KILDA
WITH NOTES ON ANOTHER MEMBER OF THIS GENUS FROM WALES

BY

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INTRODUCTION

The genus *Multioppia* was described by HAMMER (1961) to include oppioid mites with 12 pairs of notogastral setae, reduced lamellae and disc-shaped sensilli. The head of each sensillus bears a series of radiating spikes or branches which may vary in number and length from species to species. Other features, possibly important at the generic level, include the presence of two rows of pale areas, arranged longitudinally, on the posterior part of the prodorsum; the presence of a pointed discidium projecting between the insertions of legs III and IV; coxisternal chaetotaxy expressed by the formula (3-1-3-3); adanal fissure located close to, and parallel with, the lateral margin of anal aperture; all tarsi are monodactyle.

Three species belonging to this genus have been described from the Andes Mountains of South America (HAMMER, 1961, 1962), namely *M. radiata* (the type) and *M. stellifera* from Peru, and *M. australis* from Chile. BALOGH (1965) has indicated that the genus has been found in Europe although, as far as we are aware, it has not previously been recorded from Great Britain. The material which forms the subject of this report originates from two widely separate, and apparently distinct, sites in western Britain, namely a grassland soil on the island of St. Kilda off the west coast of Scotland, and a salt marsh at Llanrhydian, Pembrokeshire, South Wales. At each site a different species is represented and both appear to be new. The St. Kilda species is described below under the name *Multioppia pulchra*; the material from Llanrhydian consists of a single damaged specimen which is identified, for the present, merely as *Multioppia* sp. This specimen, together with the holotype and five paratypes of *M. pulchra*, has been placed in the British Museum (Natural History). Five paratypes of *M. pulchra* are in the collection of the Department of Forestry and Natural Resources, University of Edinburgh.

Multioppia pulehra n. sp.

Measurements : Average length of body : 300 μ (range : 290 μ -310 μ) ; average width of notogaster : 150 μ (range : 140 μ -160 μ).

Prodorsum : Broadly triangular, rostrum rounded and entire. Rostral setae (*ro*) are thickened, barbed and strongly incurved, inserted on a transverse ridge some distance behind rostrum. Lamellar setae (*la*) are usually curved and strongly barbed. Lamellae are either absent or represented by weakly developed thickenings which proceed posteriorly for a short distance from the insertions of lamellar setae. Lateral to these ridges are several pale circular areas, variable in number, arranged in a longitudinal manner extending, on each side of the prodorsum, from the anterior margin of the bothridium to the level of the insertions of the lamellar setae. Interlamellar setae (*in*) are short and finely barbed, inserted near the posterior margin of the prodorsum between the bothridia. Between the interlamellar setae are two rows of, usually, three pale areas, although the number in each row may vary from two to five. The sensillus has a compressed, semicircular head with 7-10 pointed projections radiating from its posterior edge (Fig. 3) ; the distal points, which occasionally are forked, are longer than the proximal ones. The exopseudostigmatal field is red brown in colour and is heavily sclerotized with granular markings. Each exopseudostigmatic seta is slender and incurved.

Notogaster : Ovoid in shape, narrowing posteriorly. Twelve pairs of notogastral setae are short and distinctly barbed ; their distribution is shown in Fig. 1. Fissures *ia* and *im* are apparent as short slits, located in the usual positions. A discontinuous ring of pale areas is present peripherally on the notogaster.

Ventral region of podosoma : Coxisternal ridges I, II, the ventro-sejugal and IV are well developed and extend to the mid-ventral line where they join a distinct sternal thickening ; coxisternal ridge III is lacking and fields III and IV are fused as a consequence ; these fields are ornamented with a reticulate microsculpture which is also present on coxisternal fields I. Coxisternal setae are relatively short, the setal formula being (3-1-3-3). Coxisternal setae 3c are rather longer than the remainder and are inserted on prominent tubercles which project beyond the lateral contour of the podosoma. Coxisternal ridge IV is strongly curved postero-laterally around the anterior margin of the genital field.

Genito-anal region : Genital aperture is rather rounded in outline ; each genital plate bears five simple setae, the most anterior of which is situated on the anterior margin of the genital plate. The anal plates are about $1\frac{1}{2}$ times as large as the genital plates and each bears two simple setae. A single pair of aggenital setae is located about half-way between the genital and anal fields. There are three pairs of simple adanal setae, inserted as shown in Fig. 2. The adanal fissure is a short slit located off the lateral margin of the anal field.

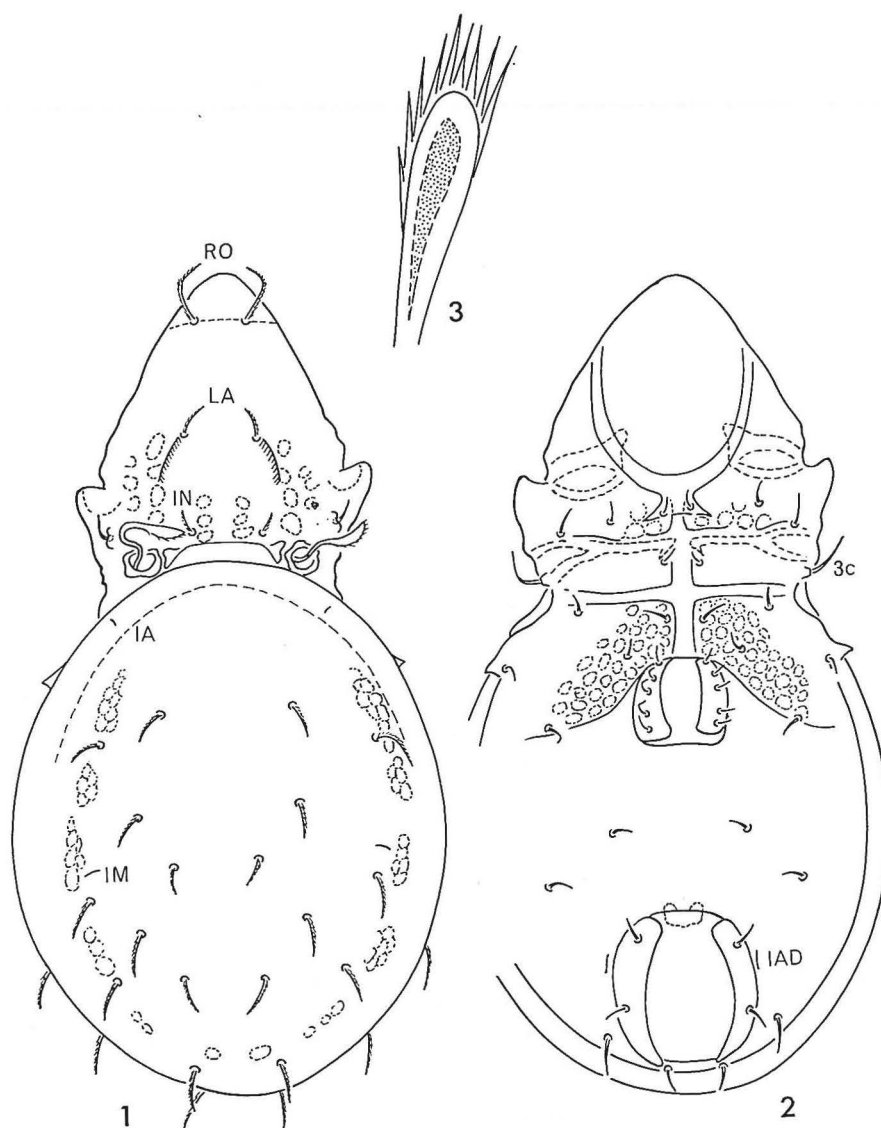
Lateral region of podosoma : Pedotectum I is large, with well rounded lateral contour, pedotectum II is lacking. The discidium between the insertions of legs III and IV is produced into a sharp point at the base of which is the insertion of coxisternal seta 4c.

Legs : Chaetotaxy was not studied in detail ; all tarsi are monodactyle, the claw being rather strongly developed.

Locality data : Between two and three hundred individuals were collected in soil cores from St. Kilda by Dr. D. R. GIFFORD of the Department of Forestry and Natural Resources,

University of Edinburgh, in 1962. The sites sampled consisted of mixed Zooplethismic grassland, and a Molinietum (McVEAN 1951).

Remarks : The three species of this genus described previously, namely *M. radiata*, *M. stellifera* and *M. australis*, are very similar to each other in many respects, and appear to differ mainly in the form of the sensillus and the distribution pattern of setae on the notogaster. With regard to the latter character, the new species described above, *M. pulchra*, shows a closer resemblance to *M. australis* than to the other two South American species. In addition, both *M. pulchra* and *M. australis* show faint traces of a lamellar ridge on the prodorsum. The main differences between these two species appear to be : (a) that the pointed projections on the head of the sensillus are fewer in number and more variable in length in *M. pulchra* than in *M. australis*, and (b) that the peripheral ring of pale areas on the notogaster of *M. pulchra* is largely lacking in *M. australis*.



FIGS. 1-3. — *Multioppia pulchra* n. sp.

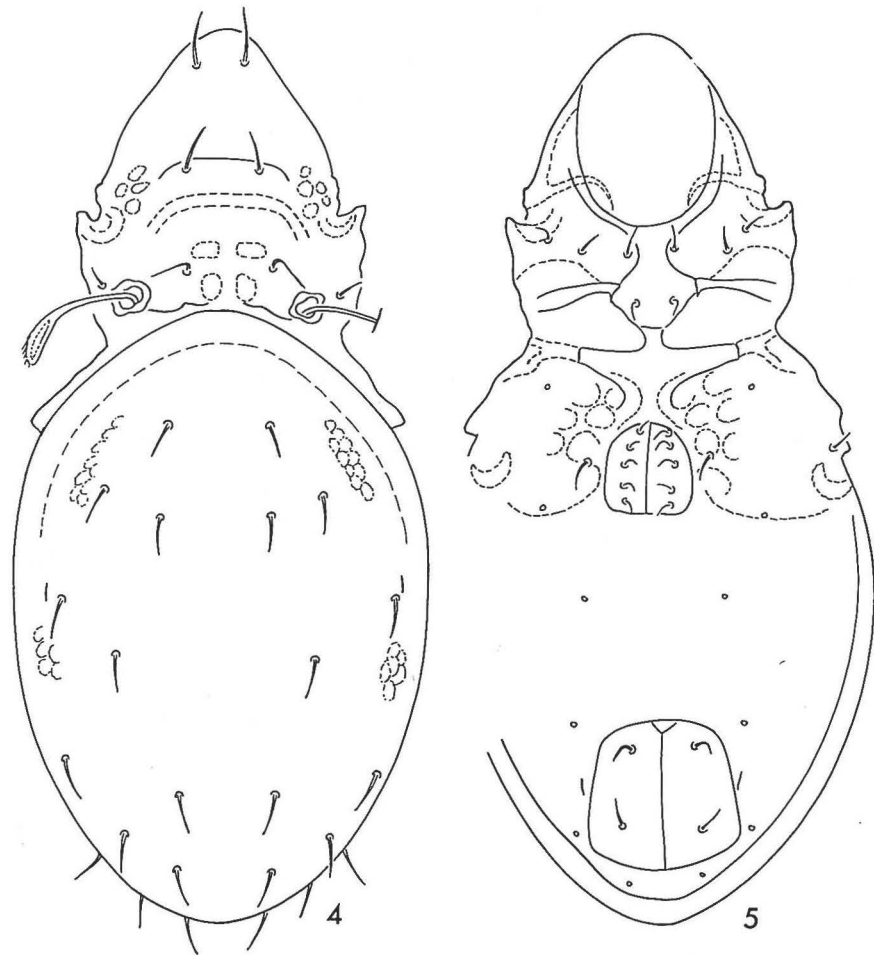
(1) dorsal, (2) ventral, (3) head of sensillus. RO rostral setae ; LA lamellar setae ; IN interlamellar setae ; IA, IM notogastral fissures ; IAD adanal fissure.

Multioppia sp.

Measurements : Length of body : 320 μ ; width of body : 160 μ .

Colour of body : Pale yellow-brown.

Prodorsum : Triangular in shape, rostrum rounded and entire. Rostral setae are simple and only slightly curved, inserted on an indistinct transverse ridge some distance behind anterior margin of rostrum. Lamellar setae are straight and simple, inserted behind a faint transverse line. Posterior to the insertions of these setae is another transverse ridge, rather broad and in the form of an inverted U-shape. Interlamellar setae are simple and inserted just anterior to the level of the bothridia. Between the interlamellar setae are two pairs of rather large rounded or rectangular pale areas, and similar but smaller areas are also present laterally on prodorsum. The sensillus has a compressed spindle-shaped head with five short fine points radiating from the posterior edge.



FIGS 4-5. — *Multioppia* sp. from Llanrhydian salt marsh. (4) dorsal, (5) ventral.

Notogaster : Ovoid in shape, anterior margin strongly thickened. Twelve pairs of notogastral setae are all simple ; their insertion pattern is shown in Fig. 4. Pale areas are present on the peripheral regions of notogaster. Notogastral fissure *im* is aligned longitudinally.

Ventral region of podosoma : Coxisternal ridges are weakly sclerotized ; sternal ridge is broadly expanded at the junction of right and left halves of coxisternal ridges II and in ventro-sejugal region. A reticulate pattern of microsculpture is apparent only on surface of the fused coxisternal fields III and IV. Coxisternal chaetotaxy appears to be normal although it was not possible to identify the full complement of setae.

Genito-anal region : Genital aperture is ovoid in shape, anterior margin rounded, posterior margin truncate. Each genital plate bears at least 5 simple setae, and a sixth may be inserted on the anterior margin of the plate although this is difficult to see. Anal aperture is large and parallel-sided ; each anal plate bears two setae, and there are three pairs of adanal setae inserted around the anal field.

Lateral region of podosoma : Pedotectum I is developed and has a truncated appearance in dorsal view. Pedotectum II is lacking. The discidium is a prominent ridge, with its apex produced into a right-angle.

Legs : All tarsi are monodactyle.

Locality data : The single specimen was collected by Dr. M. LUXTON from a salt marsh at Llanrhydian, Pembrokeshire in 1964.

Remarks : The specimen examined and described above appears to belong to a species which is quite distinct from *M. pulchra* and from the three South American species mentioned earlier. The curious pattern of transverse ridges on the prodorsum, the presence of only two pairs of pale areas in the interlamellar region, the spindle-shaped sensillus and the simple unbarbed character of the dorsal setae may serve to identify this as a new species, although more material is required before this can be established with certainty.

ACKNOWLEDGEMENTS

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SUMMARY

A new species of cryptostigmatid mite belonging to the genus *Multioppia* is described from St. Kilda. A member of this same genus is reported from Pembrokeshire. This appears to be the first published record of the presence of this genus in Great Britain.

REFERENCES

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