

# ADDITIONS TO THE BRITISH AND IRISH MITES OF THE GENUS *VEIGAIA* (ACARI : VEIGAIIDAE) WITH A KEY TO THE SPECIES.

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TAXONOMY,  
*VEIGAIA*,  
BRITAIN,  
IRELAND

SUMMARY : *Veigaia agilis* (Berlese) and *V. exigua* (Berlese) are redescribed and a key is given to the species of the genus *Veigaia* found in Britain and Ireland.

TAXONOMIE,  
*VEIGAIA*,  
GRANDE  
BRETAGNE,  
IRLANDE

RÉSUMÉ : *Veigaia agilis* (Berlese) et *V. exigua* (Berlese) sont redécrites et une clé des espèces du genre *Veigaia* de Grande Bretagne et d'Irlande est établie.

Most of the species mentioned in this paper have been adequately described in the literature (EVANS, 1955; FARRIER, 1957; BREGETOVA, 1961; GHILAROV and BREGETOVA, 1977). HIRSCHMANN (1962) has depicted the chaetotaxy of *Veigaia kochi*, *V. nemorensis* and *V. transisalae*. ATHIAS-HENRIOT (1961, 1968) has figured the insemination apparatus of *V. bouvieri*, *V. exigua* group, *V. nemorensis* and *V. serrata* and states that it is absent in *V. cerva*. HURLBUTT (1983) draws attention to the distinctions between *V. agilis* and *V. exigua*, two species which had previously been the subject of some confusion. He mentions that *V. agilis* has been found in England, but *V. exigua* has not previously been reported from Britain or Ireland.

In this paper *Veigaia agilis* and *V. exigua* are redescribed from British and Irish material and a

key is given to all the species known from this region. Keys to the gamasine families of Britain and Ireland and to the genera of the family Veigaiidae may be found in EVANS and TILL (1979).

## Genus *Veigaia* Oudemans

*Cyrtolaelaps* BERLESE, 1892 : fasc. 64 no. 3.  
*Veigaia* OUDEMANS, 1905 : 6 (nom. nov. pro *Cyrtolaelaps*  
Berlese, 1892, non Berlese, 1887).

Type species : *Gamasus nemorensis* C. L. Koch, 1839.

*Characteristics* : Chelicerae provided with a long spermatodactyl in the male (at least twice the length of the movable digit). Hypognathal denticles pro-

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minent, usually eight to eleven multidenticulate, transverse rows, rarely four. Internal malae lobed and ciliated in female, simple or pilose in male. Apotele on palptarsus with three tines.

Female with two dorsal shields or a single laterally incised shield; male with dorsal shield entire or divided, posterior region fused with ventrianal shield. Sternal shield of female produced between coxae I and II, metasternal setae on separate platelets. Ventral shield free or fused with genital shield; may also be fused with podal and/or

peritrematal shields. Porose areas (punctiform organs) conspicuous posterior to coxae IV. Epigynial portion of genital shield well developed. Genital shield usually with three pairs of setae. Anal shield with normal three setae, or with an additional pair of opisthogastric setae.

Male with sterniti-genital and separate ventral shield fused with dorsal shield. Peritrematal shield fused with dorsal shield anteriorly, free or fused with podal and/or ventral shield posteriorly.

Tarsi II-IV often markedly elongated in distal

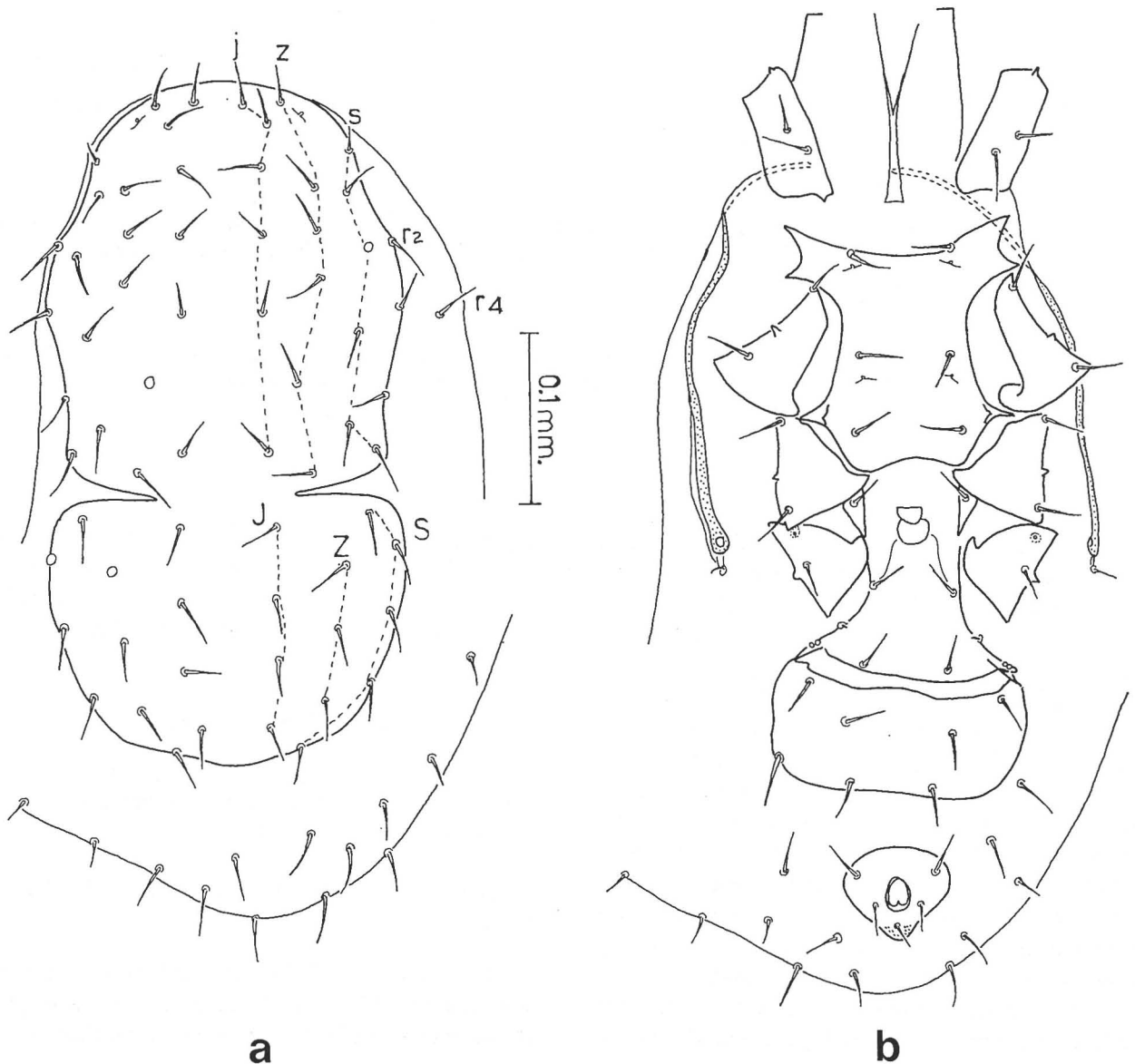


FIG. 1 : *Veigaia agilis* (Berlese) female; dorsum (a) and venter (b).

half. Seta  $pd_1$  of tibia IV often considerably longer than the other dorsal setae on this segment. Genu and tibia II may have two or three postero-dorsal setae ( $2 - \frac{2}{1} \frac{2/3}{1} - 2$ ); genu III with nine setae, tibia III with eight setae, genu IV with ten setae.

*Biological Notes* : Members of this genus commonly occur in coniferous and deciduous litter and in moss. They are probably predatory in habit.

*British species* :

1. *Cyrtolaelaps agilis* BERLESE, 1916 : 299.
2. *Cyrtolaelaps bouvieri* BERLESE, 1916 : 158.
3. *Gamasus cervus* KRAMER, 1876 : 83.
4. *Cyrtolaelaps exiguus* BERLESE, 1916 : 300.  
Syn. *Veigaia decurtata* ATHIAS-HENRIOT, 1961 : 413.
5. *Cyrtolaelaps kochi* TRÄGÅRDH, 1901 : 61.  
Syn. *Cyrtolaelaps herculeanus* BERLESE, 1904 : 240.
6. *Gamasus nemorensis* KOCH, 1839 : fasc. 24 no. 18.  
Syn. *Cyrtolaelaps humilis* HULL, 1918 : 75.
7. *Cyrtolaelaps* [*nemorensis* var] *planicola* BERLESE, 1892 : fasc. 63 no. 6.  
Syn. *Veigaia serrata* WILLMANN, 1935 : 10.
8. *Cyrtolaelaps transisalae* OUDEMANS, 1902 : 28.

*Veigaia agilis* (Berlese)

*Cyrtolaelaps agilis* BERLESE, 1916, Redia 12 : 299-300.  
*Veigaia agilis*, EVANS, 1955, Proc. zool. Soc. Lond. 125 : 584.

*Female* (Figs. 1, 3b, 4g, 6b) : Movable digit of chelicera  $3\frac{1}{2}$  times length of corniculus, with two small teeth; fixed digit with two teeth. External malae not forked apically; internal malae not clearly visible in the specimens examined. Gnathotectum with an undivided, barbed median process and narrow, apically barbed lateral processes. Chaetotaxy of palp trochanter to tibia (2-5-6-?13). Palp genu with antero-medial seta comb-like, postero-medial seta simple.

Body length, excluding gnathosoma, about 400  $\mu$ m. Dorsal shield entire, with transversely placed lateral incisions. Podonotal part of shield with 21 pairs of setae,  $r_4$  situated on soft cuticle; opisthonotal part of shield with 12 pairs of setae; setae on dorsal shield uniform in length.

Tritosternum with two laciniae. Sternal shield bearing three pairs of setae and two pairs of pores; metasternal setae on separate small shields. Genital shield with three pairs of setae, fused postero-laterally with ventral shield which bears three to four pairs of setae. Genito-ventral shield not fused with peritrematal shield. Punctiform organs on lateral extensions of genital shield and bearing two pores. Vaginal sclerites weakly developed. Peritreme narrow, extending anteriorly almost to midline of body; parastigmal seta situated on peritrematal shield. Pre-endopodal shields absent.

Width of anal shield 1.3 to 1.4 times length, measured to base of postanal seta. The shield bears five setae and there are no opisthogastric setae situated on the soft cuticle between the ventral and anal shields. The insemination organs are in the form of long, slender tubules, one on each side of the body postero-median to coxae IV. Legs bent and not suitable for study of chaetotaxy. Trochanter IV does not bear a posterior protuberance.

*Material examined* : One female from Grubbin Wood, Lancashire, England; one female from grassland, Celbridge, Co. Kildare, Eire.

*Veigaia exigua* (Berlese)

*Cyrtolaelaps exiguus*, BERLESE, 1916, Redia 12 : 300-301.  
*Veigaia exiguus*, EVANS, 1955, Proc. zool. Soc. Lond. 125 : 584.  
*Veigaia decurtata*, ATHIAS-HENRIOT, 1961, Acarologia 3 : 413-415.

*Female* (Figs. 3c, 4b) : Very similar in appearance to *V. agilis*. Movable digit of chelicera  $3\frac{1}{4}$  times length of corniculus, with two small teeth; fixed digit with two large and one very small tooth. External malae not forked apically; internal malae not clearly visible in the specimen examined.

Gnathotectum with an undivided, pilose median process and broad lateral processes with almost

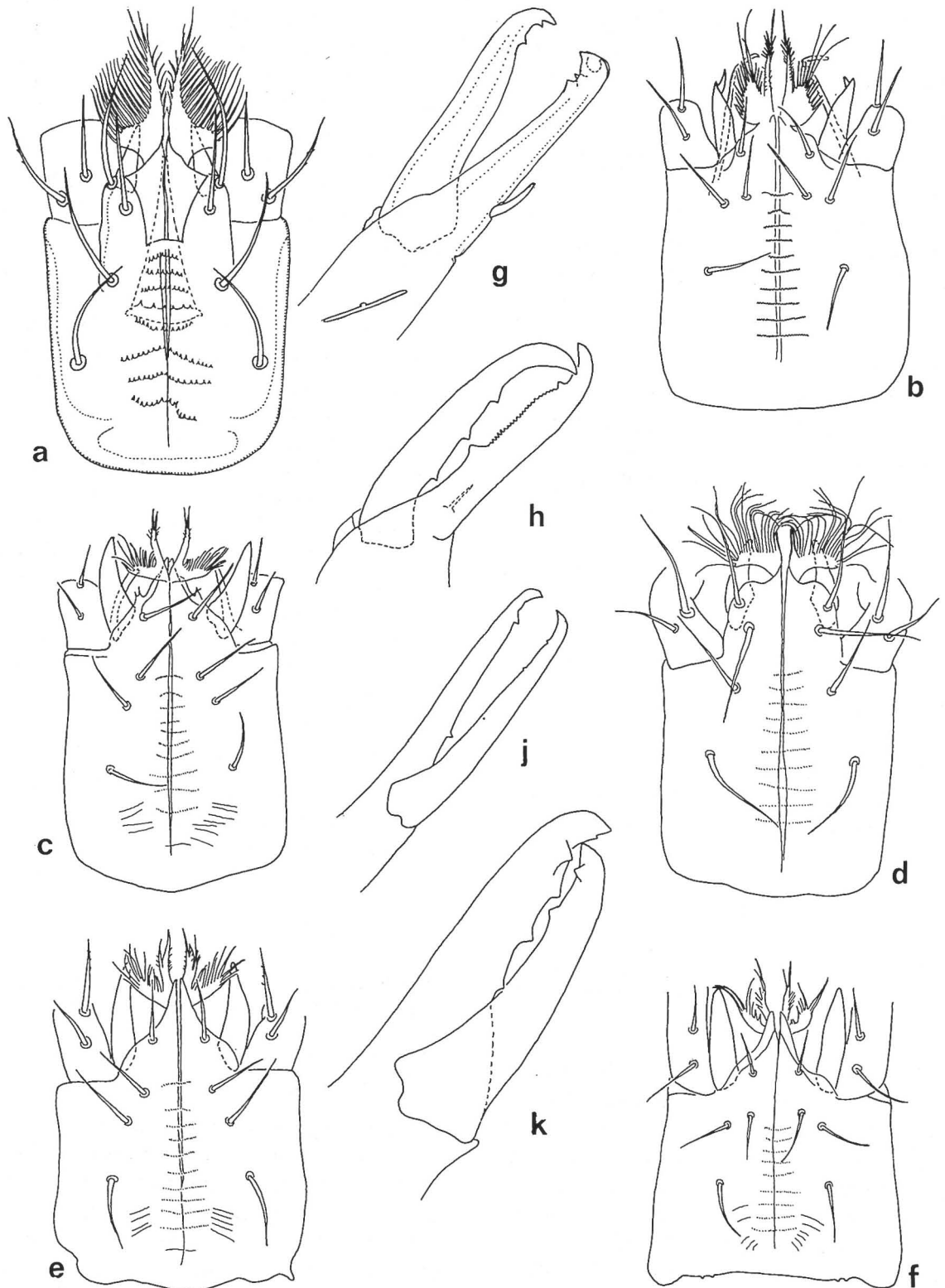


FIG. 2 : Gnathosoma of *Veigaia bouvieri* (Berlese) (a) after EVANS and TILL, 1979 ; *V. cerva* (Kramer) (b) ; *V. kochi* (Träg.) (c) ; *V. transisalae* (Oudms.) (d) ; *V. nemorensis* (Koch) (e) ; *V. planicola* (Berlese) (f). Chelicera of *V. bouvieri* (Berl.) (g) ; *V. planicola* (Berl.) (h) ; *V. agilis* (Berl.) (i) ; *V. kochi* (Träg.) (h).

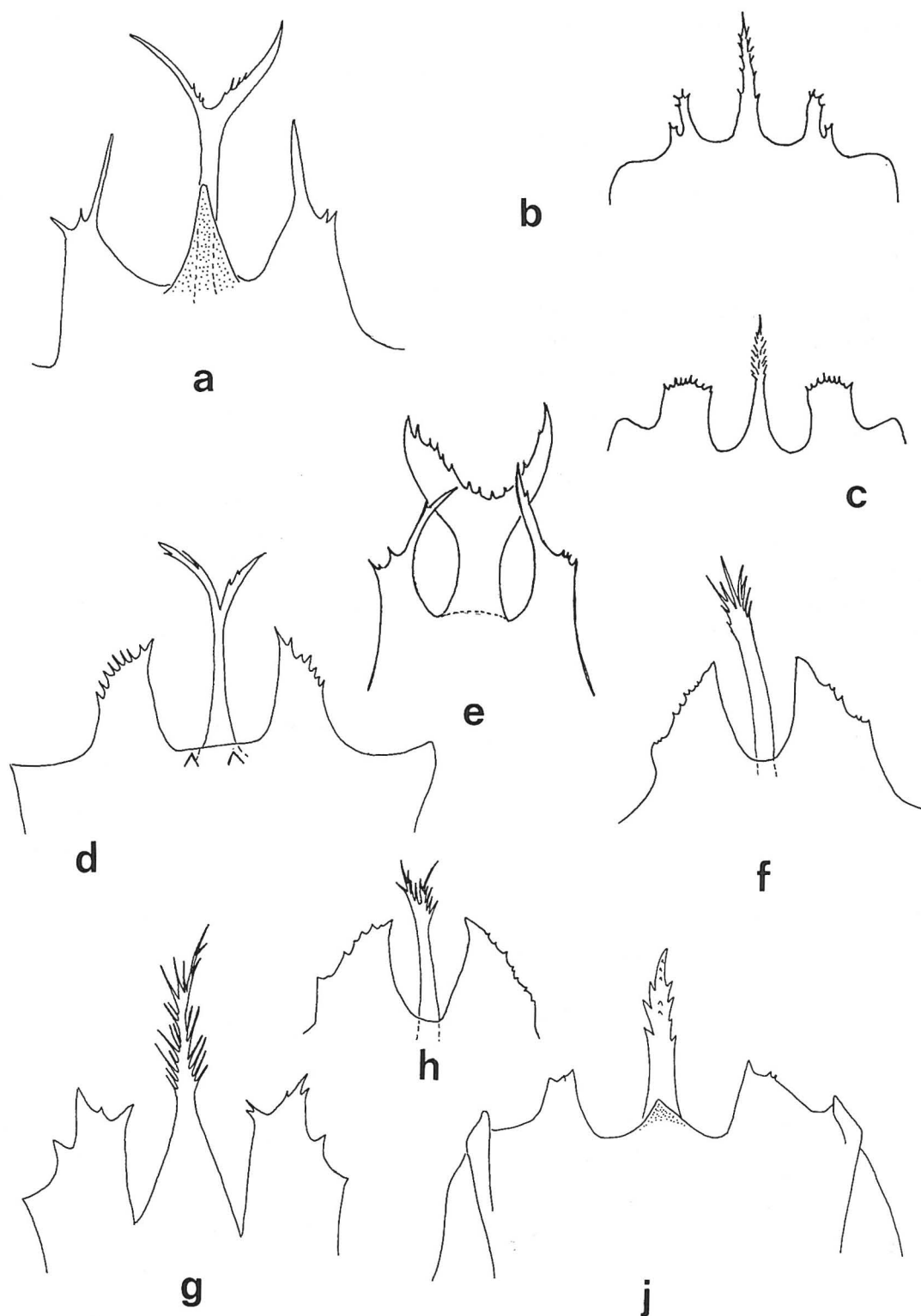


FIG. 3 : Gnathotectum of *V. transisalae* (Oudms.) (a); *V. agilis* (Berl.) (b); *V. exigua* (Berl.) (c); *V. nemorensis* (Koch) (d); *V. bouvieri* (Berl.) (e); after EVANS (unpublished); *V. kochi* (Träg.) (f and h); *V. cerva* (Kramer) (g); *V. planicola* (Berl.) (j).

truncate, barbed anterior margins. Chaetotaxy of palptrochanter to tibia (2-5-6-14). Palpgenu with antero-medial seta having a comb-like tip, postero-medial seta with a single barb near the tip.

Body length, excluding gnathosoma, about 450  $\mu$ m. Dorsal shield entire, with transversely placed lateral incisions, and with 21 pairs of setae on the podonotal part, *r*4 on soft cuticle, and with 11-12 pairs of setae on the opisthonotal part; setae uniform in length.

Tritosternum with two laciniae. Sternal shield bearing three pairs of setae and two pairs of pores; metasternal setae on separate small shields. Genital shield with three pairs of setae, fused posterolaterally with ventral shield which bears four pairs of setae. Geniti-ventral not fused with peritrematal shield. Punctiform organs on lateral extensions of genital shield and bearing two pores. Vaginal sclerites weakly developed. Peritreme narrow, extending anteriorly almost to midline of body; parastigmal seta situated on peritrematal shield. Pre-endopodal shields absent.

Width of anal shield 1.3 times length, measured to base of postanal seta. The shield bears five setae and there are no opisthogastric setae situated on the soft cuticle between the ventral and anal shields. The insemination organs could not be detected in the specimen examined. Legs broken and not suitable for a study of the chaetotaxy. Trochanter IV does not bear a posterior protuberance.

*Material examined* : One female from sand-dune, Carnsore Pt., Co. Wexford, Eire.

*Key to species*  
(Based on females only)

1. — Dorsal shield divided ..... 2
- Dorsal shield entire with lateral incisions ... 4
2. — Posterior dorsal shield with 13 pairs of setae. Genital shield not fused with ventral shield. Punctiform organs on separate small platelets. Cuticle between ventral and anal shields without very small setae (Fig. 5e). Anal shield at most 1.3 times

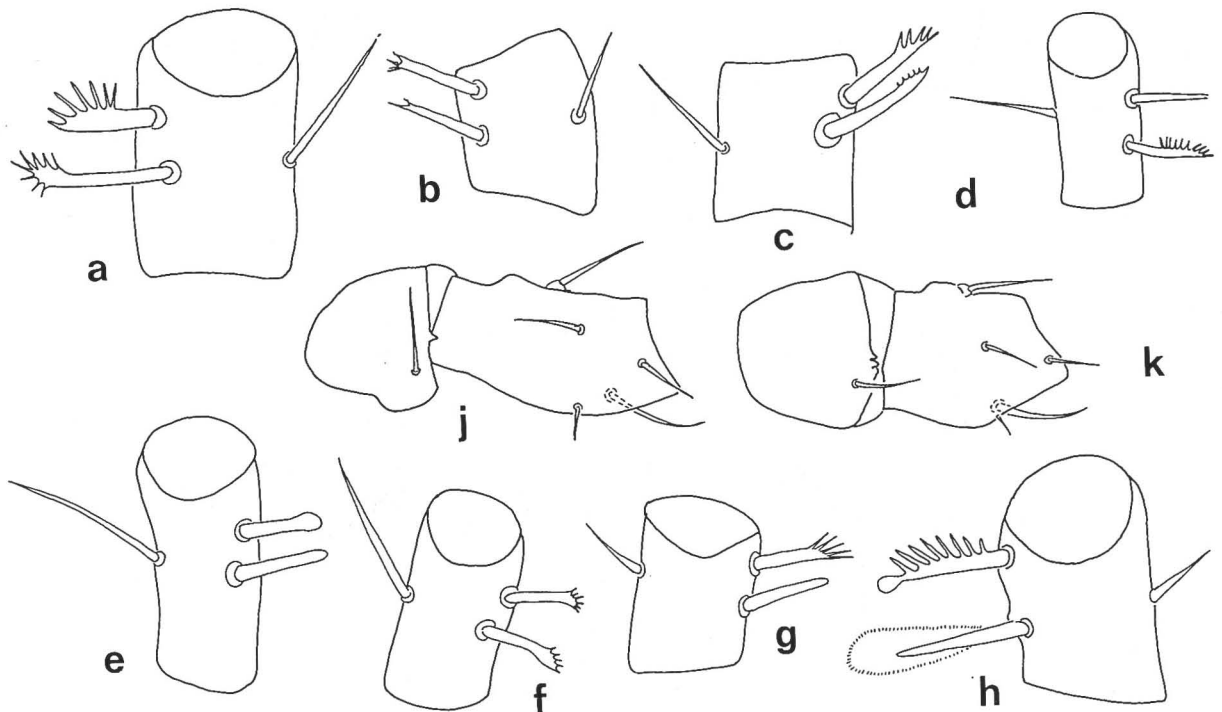


FIG. 4 : Palpgenu of *V. nemorensis* (Koch) (a); *V. exigua* (Berl.) (b); *V. planicola* (Berl.) (c); *V. kochi* (Träg.) (d); *V. transisalae* (Oudms.) (e); *V. bouvieri* (Berl.) (f); *V. agilis* (Berl.) (g); *V. cerva* (Kramer) (h).  
Coxa and trochanter IV of *V. kochi* (Träg.) (j); *V. nemorensis* (Koch) (k).

as broad as long\*. One pair of presternal shields. Gnathotectum with one small dorsal projection (Fig. 3j). Fixed digit of chelicera with a row of 18 to 20 teeth (Fig. 2h). Fourth trochanter without protuberance. Internal malae as in Fig. 2f. Insemination apparatus as in Fig. 6d.

*Veigaia planicola* (Berlese, 1892).

- Posterior dorsal shield with 18 or more pairs of setae. Genital shield fused postero-laterally with ventral shield. Punctiform organs on genital shield. Cuticle between ventral and anal shields with one

pair of very small setae. Anal shield at least twice as broad as long. More than one pair of presternal shields. Gnathotectum with two small dorsal projections, or with no dorsal projections. Fixed digit of chelicera with two to four teeth. Fourth trochanter with posterior protuberance, or with posterior protuberance plus seta ..... 3

- 3. — Dorsal setae, excluding marginals, uniform in length. Genitiventral shield fused with peritrematal shield. Ventral region of shield with five or more pairs of setae. Vaginal sclerites well developed. Parastigmal seta on fused shields (Fig. 5a). Gna-

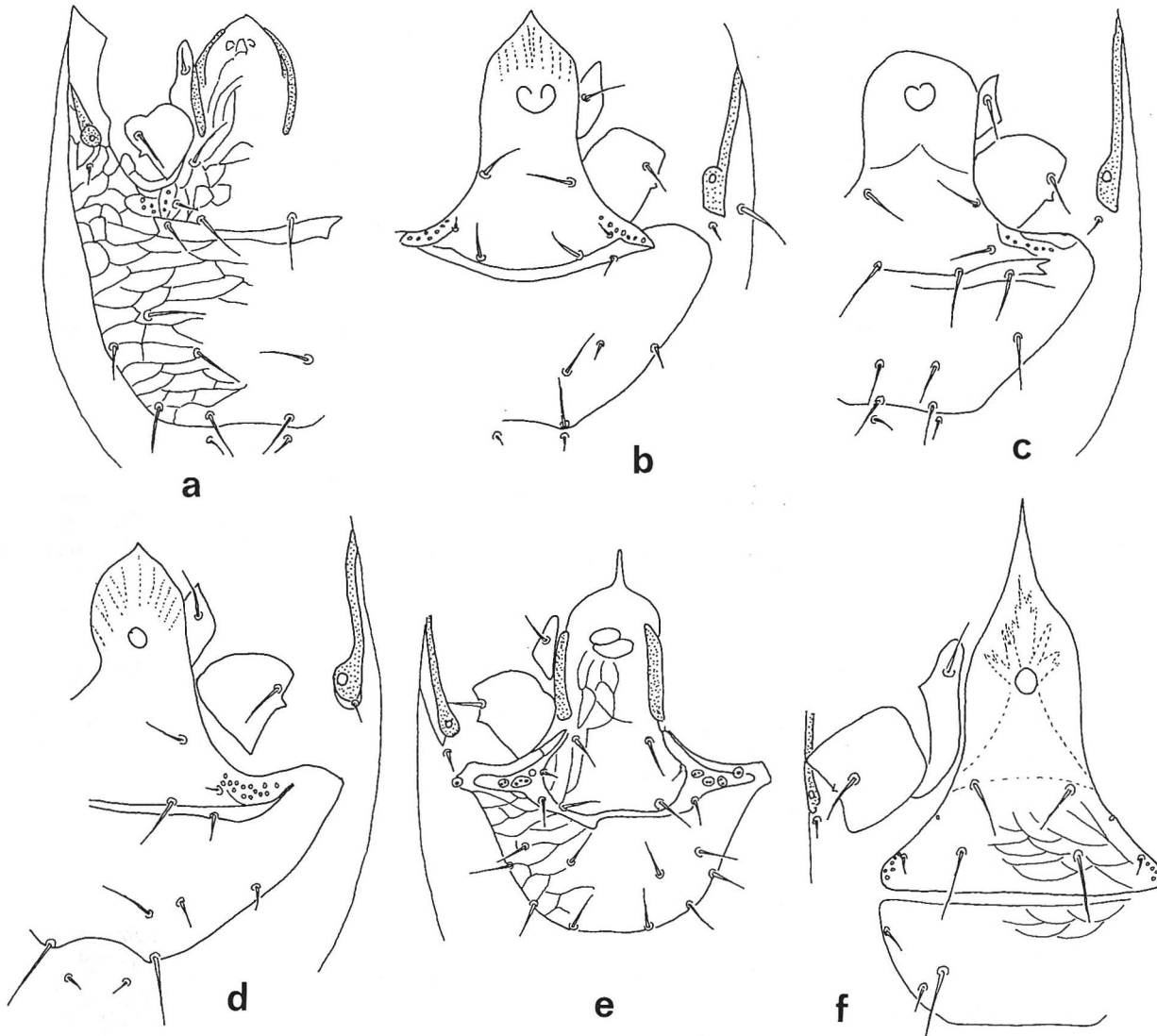


FIG. 5 : Geniti-ventral region of *V. kochi* (Träg.) (a); *V. cerva* (Kramer) (b); *V. nemorensis* (Koch) (c); *V. transisalae* (Oudms.) (d); *V. planicola* (Berl.) (e); *V. bouvieri* (Berl.) (f) after EVANS and TILL, 1979.

\* Length of anal shield measured to base of postanal seta.

thotectum with no dorsal projections (Figs. 3f and h). Anteromedial seta of palpgenu not combed (Fig. 4d). Body length greater than 1,000 microns. Fourth trochanter with posterior protuberance (Fig. 4j). Internal malae as in Fig. 2c. Insemination apparatus as in Fig. 6a.

*Veigaia kochi* (Trägårdh, 1901).

- Dorsal setae, excluding marginals, variable in length. Genitiventral shield not fused with peritrematal shield. Ventral region of shield with three to four pairs of setae. Vaginal sclerites not well developed. Parastigmal seta posterior to peritrematal shield (Fig. 5c). Gnathotectum with two small dorsal projections (Fig. 3d). Anteromedial seta of palpgenu combed (Fig. 4a). Body length less than 1,000 microns. Fourth trochanter with posterior protuberance plus seta (Fig. 4k). Internal malae as in Fig. 2e. Insemination apparatus as in Fig. 6e.

*Veigaia nemorensis* (Koch, 1839).

- 4. — Cuticle between ventral and anal shields without very small setae. Anal shield with five setae. One or more pairs of presternal shields, or none . . . 5
- Cuticle between ventral and anal shields with one pair of very small setae. Anal shield with three setae. One pair of presternal shields . . . . . 7
- 5. — Posterior dorsal shield with 15 pairs of setae. Dorsal setae, excluding marginals, variable in length. Genital shield not fused with ventral shield. Punctiform organs with five to seven pores (Fig. 5f). Anal shield 1.5 to 1.8 times as broad as long. One or more pairs of presternal shields. Movable digit of chelicera up to 2.5 times length of corniculus (Fig. 2g). Posteromedial seta of palpgenu combed (Fig. 4f). Internal malae as in Fig. 2a. Insemination apparatus as in Fig. 6c.

*Veigaia bouvieri* (Berlese, 1916).

- Posterior dorsal shield with 12 pairs of setae. Dorsal setae, excluding marginals, uniform in length. Genital shield fused postero-laterally with ventral shield. Punctiform organs with two pores. Anal shield at most 1.3 times as broad as long. Presternal shields absent. Movable digit of chelicera at least three times length of corniculus 6
- 6. — Gnathotectum with narrow lateral processes (Fig. 3b). Insemination apparatus elongate, ribbon-like (Fig. 6b). Posteromedial seta of palpgenu smooth (Fig. 4g).

*Veigaia agilis* (Berlese, 1916).

- Gnathotectum with broad lateral processes, broadly rounded anteriorly with serrated margins (Fig. 3c). Insemination apparatus not visible in material available. Posteromedial seta of palpgenu with an indistinct setalike projection near the tip (Fig. 4b).

*Veigaia exigua* (Berlese, 1916).

- 7. — Lateral incisions oblique. Posterior dorsal shield with 15 pairs of setae. Punctiform organs with five to seven pores. Anal shield 1.5 to 1.8 times as broad as long. Parastigmal seta posterior to peritrematal shield (Fig. 5b). Gnathotectum with no dorsal projections. Ventral process of tectum not divided (Fig. 3g). Movable digit of chelicera at least 3.5 times length of corniculus. External malae forked. Internal malae as in Fig. 2b. Anteromedial seta of palpgenu combed (Fig. 4h). Posteromedial seta of palpgenu with a fringed, membranous expansion.

*Veigaia cerva* (Kramer, 1876).

- Lateral incisions transverse, oblique only at tips. Posterior dorsal shield with 18 or more pairs of setae. Punctiform organs with ten or more pores. Anal shield at most 1.3 times as broad as long. Parastigmal seta on peritrematal shield (Fig. 5d). Gnathotectum with one large dorsal projection. Ventral process of tectum divided (Fig. 3a). Movable digit of chelicera up to 2.5 times length of corniculus. External malae not forked. Internal malae as in Fig. 2d. Anteromedial and posteromedial setae of palpgenu not combed (Fig. 4e).

*Veigaia transisalae* (Oudemans, 1902).

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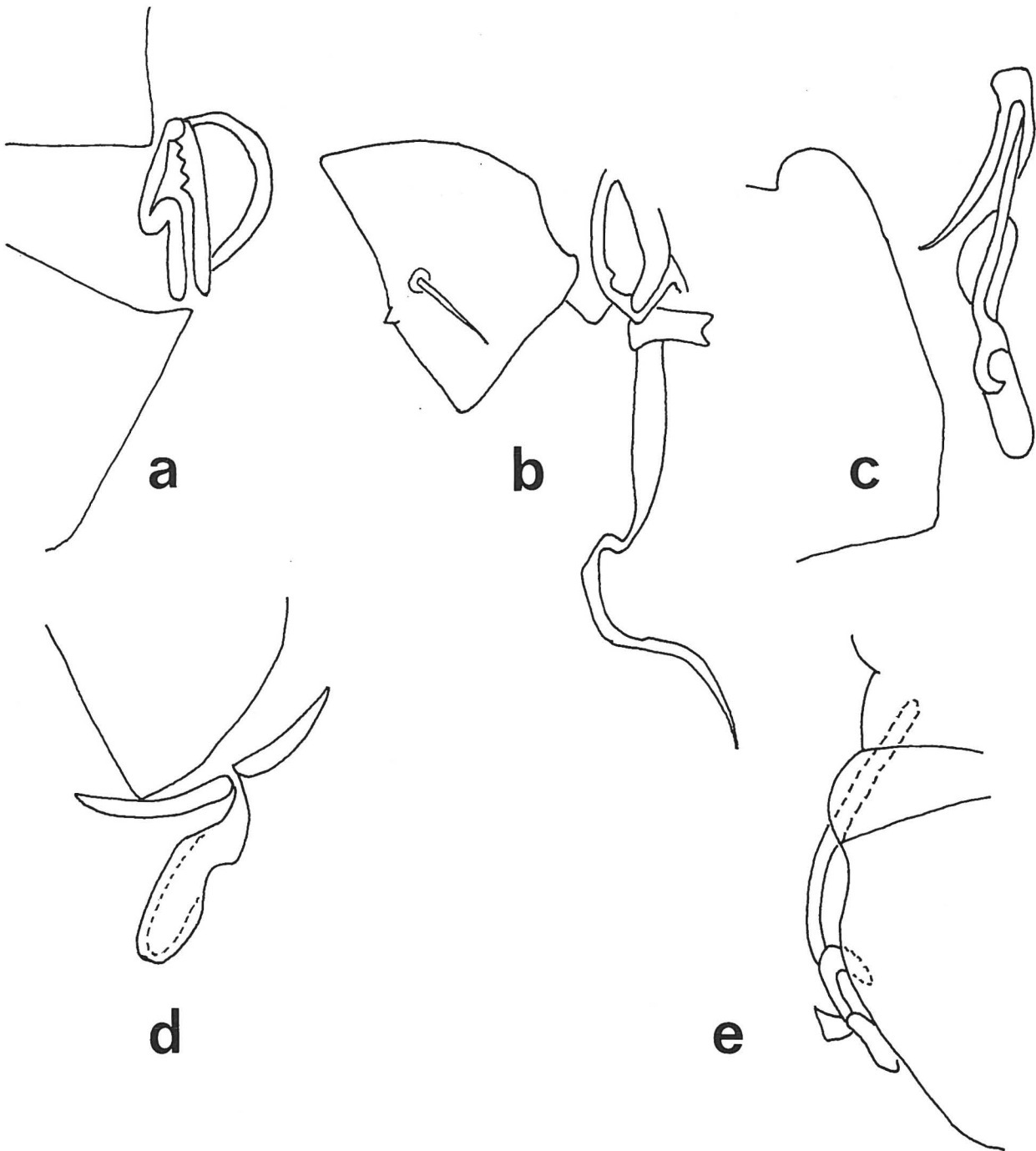


FIG. 6 : Insemination apparatus of *V. kochi* (Träg.) (a) ; *V. agilis* (Berl.) (b) ; *V. bouvieri* (Berl.) (c) ; *V. planicola* (Berl.) (d) ; *V. nemorensis* (Koch) (e).

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*Paru en Mars 1988.*