

The identity of Blackwall's *Tegenaria saeva* (Araneae, Argenidae)

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Introduction

There has been much confusion in Britain over the naming of species of *Tegenaria* of the *atrica-saeva* group, arising from a quite natural mistake made by Blackwall in his *Spiders of Great Britain and Ireland* (1861), and no one in this country really followed this up until J. Denis drew attention to it in 1959. Now a recent discovery, described below, indicates that we have been dealing with two species under Blackwall's name *saeva*.

Tegenaria atrica C. L. Koch is the name given by C. L. Koch to a female spider described in 1843. The description is not adequate for establishing its identity in the absence of figures of the genitalia, but as pointed out by J. Denis (1959) and Locket, Millidge and Merrett (1974) there is good reason to suppose that he had before him females of the species now generally known by this name of which there are labelled examples in L. Koch's collection which were either his or were compared with his. (The species was known in this country until 1959 as *Tegenaria larva* Simon, which is a junior synonym.)

In 1844 Blackwall described a male spider which he called *Tegenaria saeva*; but in 1861 in his *Spiders of Great Britain and Ireland* he said that he believed the name was a junior synonym of C. L. Koch's *T. atrica* already described, as a female, in 1843. In this however, as pointed out by Denis (1959) and by Locket, Millidge and Merrett (1974) Blackwall was mistaken, for his description of 1861 is remarkably well illustrated and is not of the species now bearing the name *T. atrica* C. L. Koch.

In recent years there have been collected in Cornwall by Dr C. G. Butler and Mr V. A. Wheatley specimens of a *Tegenaria* which each has insisted were different from, although close to, the form hitherto known as *T. atrica* C. L. K. (Locket and Millidge, 1953, figs. 6a, 7a, 9a) and *saeva* Blackwall (Locket, Millidge and Merrett, 1974, fig. 23a, e). However for reasons given below it is believed that this form found

in Cornwall and some other places in the west of Britain as far north as Caernarvonshire is identical with Blackwall's *T. saeva*, and that the form common in the rest of the country is another species, not identified hitherto with any named European species, to which I give the name *Tegenaria propinqua*.

Distinguishing characters between *Tegenaria saeva* and *T. propinqua*

Males

The difference lies in the form of the tip of the "conductor" (which derives from the tegulum and runs parallel with the embolus, see Figs. 1-5). In *T. saeva* this is finely drawn out and ends in a sharp point bent dorsally (back towards the cymbium); in *T. propinqua* it is less finely drawn out and curves ventrally (away from the cymbium). The ectal tibial apophysis in *T. saeva* has a slightly different form from that of *T. propinqua* if viewed as in Figs. 4 and 5.

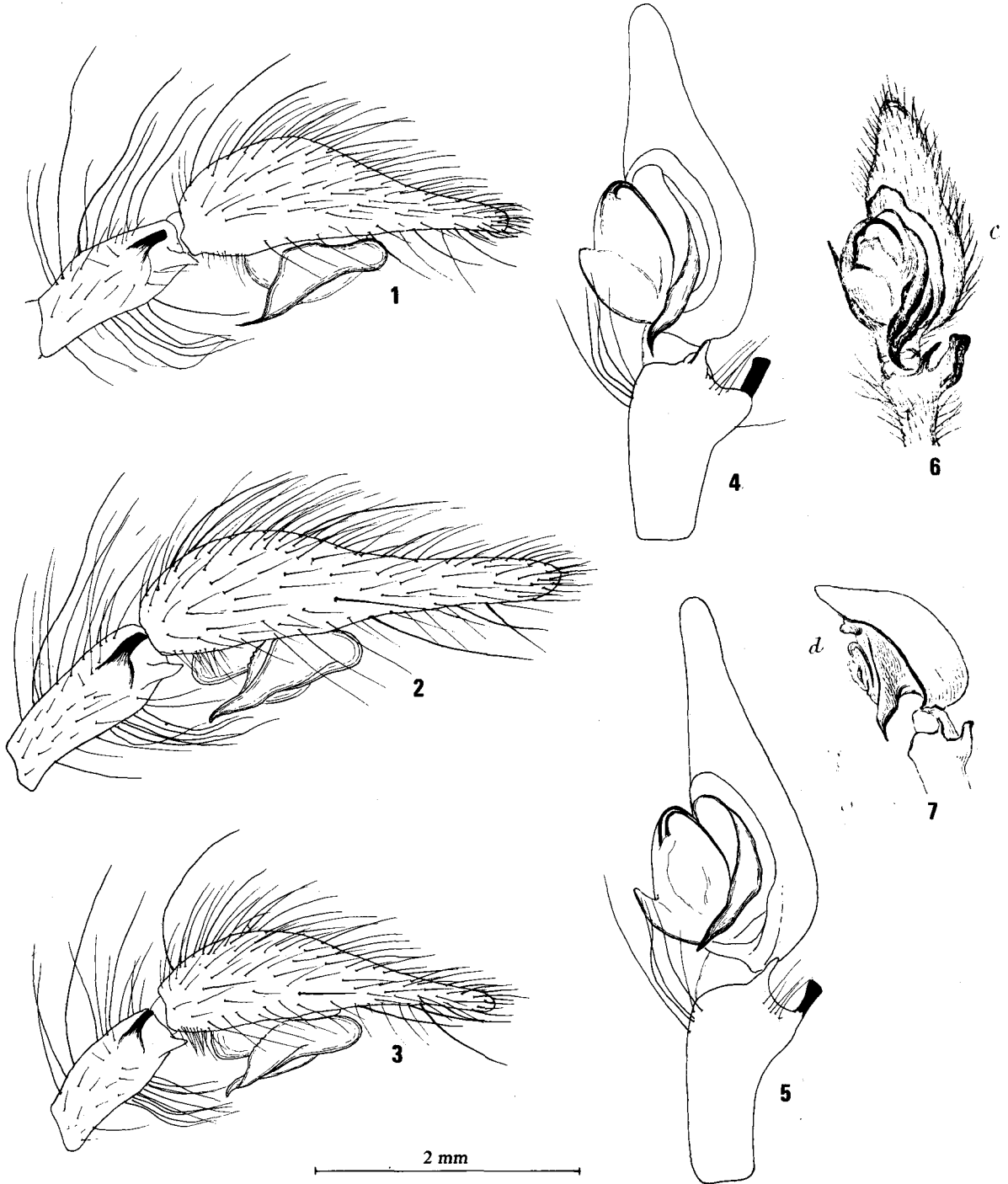
Females

In *T. propinqua* at either side of the anterior edge of the epigyne there is an arch-shaped sclerotization (probably indicating where the conductor enters during copulation). This sclerotization seems to be absent or scarcely perceptible in *T. saeva*. The pointed lateral apophyses of the epigyne vary considerably in *T. propinqua* but are generally narrower and more drawn out in *T. saeva*. The vulvae, whose outlines can usually be seen if the specimen is immersed for a while in 90% phenol in spirit, differ recognisably. The precise structure of these is difficult to see, owing to deep sclerotization, but Wiehle is probably correct in supposing that the rounded part at the anterior end is where the embolus enters in *T. saeva*, and correspondingly in *propinqua*, under the sclerotized arch. (Investigation of this is continuing)

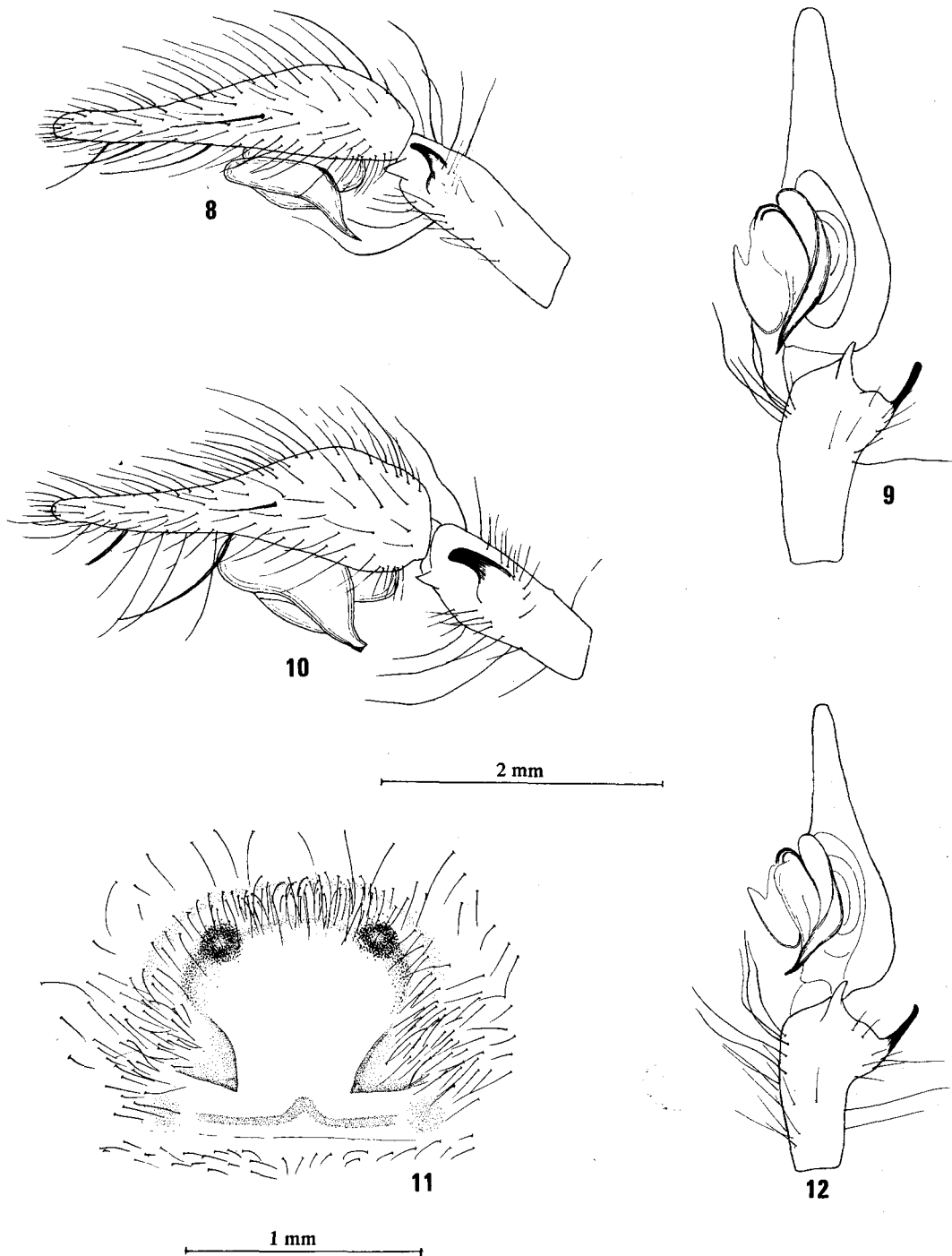
Other useful distinctions between *T. saeva* and *propinqua* have not been found. The sternum pattern is so variable in both species that it is useless; leg and palp measurements have so far given no help.

Synonymy

That Blackwall figured the form now found in Cornwall seems clear if his fig. 106c and d in Vol. I of *Spiders of Great Britain and Ireland* are compared



Figs. 1-7: *Tegenaria* male palps: 1 *T. saeva* (Cornwall) right palp; 2 *T. propinqua* (Harpenden) right palp; 3 *T. propinqua* (Gidding) right palp; 4 *T. saeva* (Cornwall) left palp, viewed as in Fig. 6; 5 *T. propinqua* (Harpenden) left palp, viewed as in Fig. 6; 6 *T. saeva*, Blackwall's fig. 106c; 7 *T. saeva*, Blackwall's fig. 106d.



Figs. 8-12: *Tegenaria* male palps and female epigyne: 8 *T. saeva* (Barcelona) left palp; 9 *T. saeva* (Barcelona) left palp, viewed as in Figs. 4 and 5; 10 *T. saeva* (Paris) left palp; 11 *T. saeva* (Paris) epigyne; 12 *T. atrica* C. L. Koch, left palp viewed as in Figs. 4 and 5.

with the appearance of the palps of the two British forms looked at in exactly the same position (Figs. 4 and 5). The flexing of the conductor is the same as in the Cornish forms, as is also the appearance of the ectal tibial apophysis in his fig. 106c (see Figs. 4 and 6). Since a specimen sent by Dr Merrett collected at Bangor (Caernarvonshire) also corresponds to the Cornish form, there is nothing improbable about this suggestion.

Another piece of evidence lies in the finding by Mr E. Taylor of a female specimen among those used by Tuffen West to draw the figures for the plates of *The Spiders of Great Britain and Ireland*. (What remains of this material was separated and numbered by F. O. Pickard-Cambridge in January 1895 and is kept in the Hope Department of Entomology at Oxford.) The female specimen, labelled "Types Bl. 37.", whose epigyne is shown in Fig. 14 is the same as the Cornish form and was presumably used for Blackwall's fig. 106a.

On the continent, there seems no doubt that Wiehle (1963) described *T. saeva* and the figures given by Dresco (1957, figs. 7, 8, 9) also correspond. A pair labelled "*T. saeva*", taken in France, from the Muséum national d'Histoire naturelle of Paris correspond to the Cornish specimens. The male has only the left palp, and the tip of the conductor has been broken off, but it clearly is flexed towards the cymbium (see Fig. 10) as opposed to *propinqua* where it is flexed the other way. The female's epigyne (Fig. 11) is similar to that of *saeva* but is wider (it is clearly not that of *propinqua*).

On the other hand fig. 1545 in Vol. VI (5) of Simon's *Arachnides de France* (1937) is clearly not of *saeva*, as stated, but of *propinqua*, so that the two have been confused in France also. It was possible that Simon's *T. duellica* (*Arachnides de France*, Vol. II (1875), p. 83 and Pl. V, fig. 6) was the same species as *propinqua*, but there is no type material of *T. duellica* in the Muséum national at Paris and the only specimen so labelled (a female) is certainly not *propinqua*.

An interesting specimen from the Senckenberg Museum (No. 8942/1) labelled "Monte Tibidabo b. Barcelona. 500 m." is in some ways intermediate between *T. saeva* and *T. atrica* (see Figs. 8 and 9). It was assigned to *T. saeva* by Dr O. Kraus (on the label), I think correctly, because although the tibial

apophysis is very narrow, it lacks the slight hook on its end characteristic of *atrica*, and the conductor is flexed towards the cymbium, not standing out as in *atrica* (cf. *British Spiders*, Vol. II, fig. 6b = *larva*). There was no corresponding female.

Through the courtesy of Dr E. Dresco I have examined the type of his *T. deroueti* (1957) and, as he points out in a paper as yet unpublished, that species is very close to *T. atrica* C. L. Koch; it is certainly not *T. saeva* or *propinqua*.

A critical study of all the available European material of the *Tegenaria saeva-atrica* group is needed and it is desirable that a neotype for *T. atrica* C. L. Koch (a female) should be chosen.

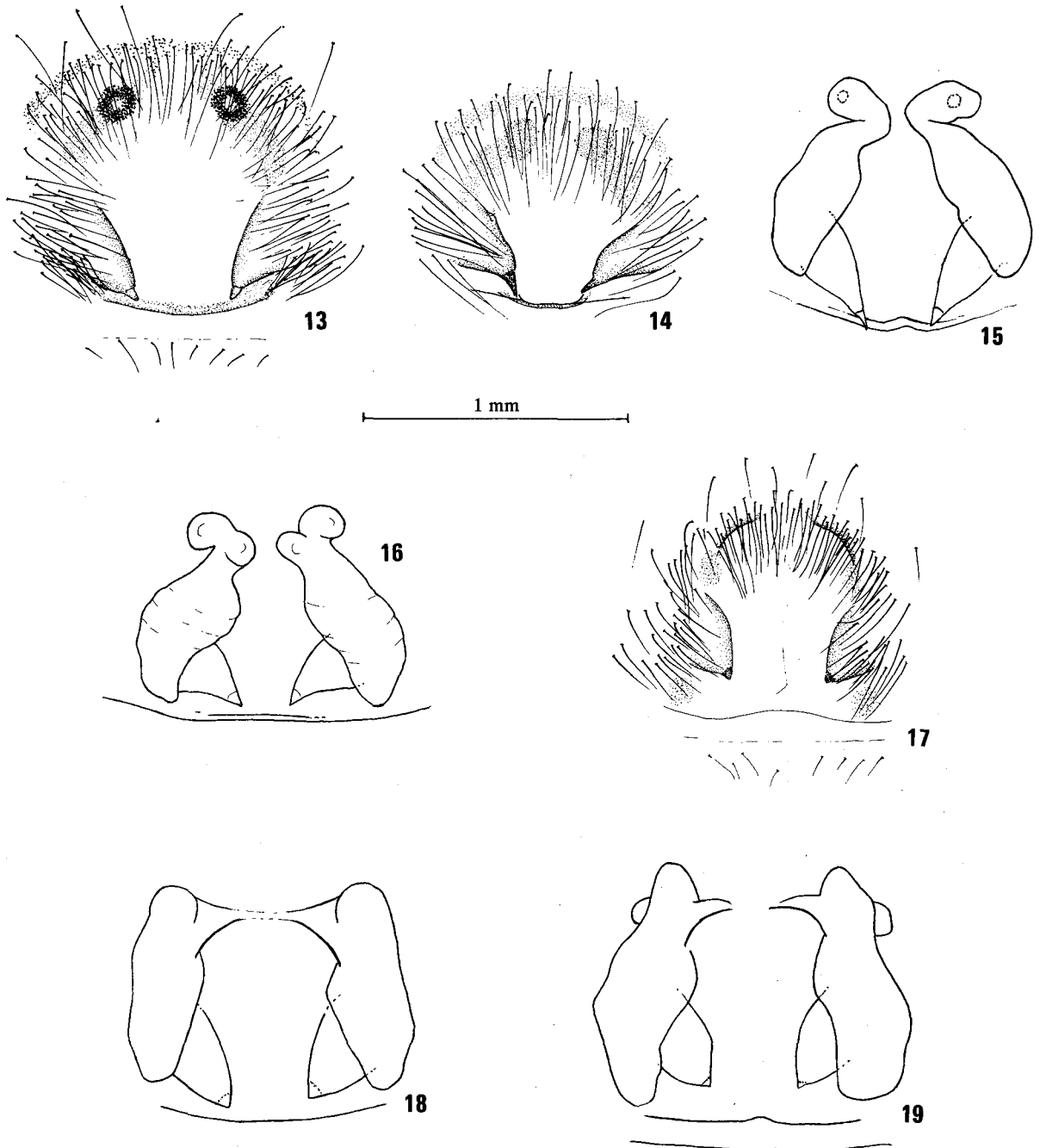
Distribution

It must be emphasised that any conclusions about the distribution and relative abundance and habitats of *T. saeva* and *T. propinqua* on present information would be premature and misleading. All that can be said is that both species have been found indoors and out of doors and that the records of *saeva* tend to be from the west of Britain. It is hoped that workers in Britain will communicate any records and observations they have to Dr P. Merrett (Institute of Terrestrial Ecology, Furzebrook Research Station, Wareham, Dorset) since he is anxious to keep the British records up to date. The distribution of *T. propinqua* (with *saeva*, since they have been confused in the past) is given in *British Spiders*, Vol. III, map. no. 218.

T. saeva, as identified by the characters given above, has been found so far in Cornwall (both indoors and in clefts in rocky cliffs), Whiteford (Gower Peninsula, Glamorganshire), Montgomeryshire, Denbighshire, Bangor (Caernarvonshire), Felbridge (Surrey), Isles of Scilly, Jersey (C.I.), Dorset.

Material

The material used in the present investigation was as follows:— *T. saeva*: Porthpean (Cornwall) indoors and in webs in a rocky cliff ♂♂11 ♀♀6 (C. G. Butler); Goonhilly and Helston (Cornwall) ♀♀ (V. A. Wheatley and J. R. Parker); Par ♀ and Kynance ♀ (Cornwall), Isles of Scilly ♂ ♀♀3, Felbridge (Surrey) ♂, Bangor (Caernarvonshire) ♂ (P. Merrett); Llwynygog (Montgomeryshire) ♀ (Miss C. M. Merrett); Whiteford dunes (Gower) ♀♀2 (E. Duffey); Jersey (Channel Isles) ♀



Figs. 13-19: *Tegenaria* female epigynes and vulva outlines: 13 *T. saeva* (Cornwall) epigyne; 14 *T. saeva* (Oxford "Types No. Bl.37.") epigyne; 15 and 16 *T. saeva* vulva outlines; 17 *T. propinqua* (Leckford) epigyne; 18 and 19 *T. propinqua* vulva outlines.

(B.M. leg. E. Browning); France ♂♀ (Mus. nat. Hist. nat., Paris).

T. propinqua: Gidding (Huntingdonshire) in a building ♂, Wangford (Suffolk) out of doors ♂♀ (E. Duffey); Thursley (Surrey) out of doors ♀, Felbridge (Surrey) ♂♂, Wareham (Dorset) ♂ (P. Merrett); Peacehaven (Sussex) ♀, B.M. (S. Kensington) ♂ (B.M. leg. D. J.

Clark); Hounslow (Middlesex) ♀♀3 (B.M. leg. E. Browning); Chelsea (London) ♀, Charlbury (Oxford) ♀, Stoke Poges (Bucks) ♀ (B.M.); Harpenden (Herts) ♂♂ ♀♀ (C. G. Butler); Flatford Mill (Suffolk) ♂♂ ♀♀, Harefield Chalk Pit (Middlesex) out of doors ♀, Leckford (Hants) ♂♂ ♀♀ (G. H. Locket).
(B.M. = British Museum (Natural History))

Summary of nomenclature

The following summary of the nomenclature position may save British workers further confusion:—

Name now to be used	Name given to the species in <i>British Spiders</i> Vol. III	Name given in <i>British Spiders</i> Vol. II	Name given in <i>Spiders of Great Britain and Ireland</i>
<i>T. atrica</i> C. L. Koch	<i>T. atrica</i> C. L. K.	<i>T. larva</i> Simon	(none)
<i>T. saeva</i> Blackwall	(none)	(none)	<i>T. atrica</i> C. L. K.
<i>T. propinqua</i> sp.n.	<i>T. saeva</i> Bl.	<i>T. atrica</i> C. L. K.	(none)

Tegenaria propinqua sp. n. is described and figured under the name "*Tegenaria atrica* C. L. Koch" in *British Spiders* by G. H. Locket and A. F. Millidge, 1953 (p. 10, figs. 6a, 7a, 9a). The holotype male and allotype female will be placed in the British Museum (Natural History); both are from Leckford (Hants).

Acknowledgements

This enquiry arose from the persistent doubt expressed by Dr C. G. Butler and also by Mr V. A. Wheatley and Dr P. Merrett about the identity of *Tegenaria* specimens collected by them in Cornwall. To them and to the following I am grateful for the loan of material: Dr E. Dresco (Muséum national d'Histoire naturelle, Paris), Dr M. Grasshoff (Senckenberg Museum), Mons. M. Hubert (Muséum national d'Histoire naturelle, Paris), Prof. G. C. Varley and Mr E. Taylor (Hope Department of Entomology, Oxford), Mr F. R. Wanless (British Museum (Natural History)). I wish to thank also Dr C. G. Butler, Mr J. Crocker, Dr E. Duffey, Dr A. F. Millidge, Mr J. R. Parker and Mr F. R. Wanless for reading and commenting on the original draft.

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