

THE BRITISH SPECIES OF *CRYPTOPS*

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INTRODUCTION

There are only three British species in the order Scolopendromorpha which includes the so called "giant centipedes" of warmer latitudes. All are in the genus *Cryptops* and are light reddish brown in colour; up to 35mm or more long and totally lacking ocelli. The coxosternite of the poison claws lacks teeth but instead bears several setae.

The head of *Cryptops* is circular to oval with at least a trace of a pair of dorsal paramedian sutures running from the bases of the antennae (near the outer edge) to the central part of the posterior margin. The antennae are usually composed of about 17 articles, sometimes less, occasionally more. The labrum is a well defined structure with large, well defined side-pieces and a narrow mid-piece. In *Cryptops parisi* the side-pieces are notched so that there appears to be five teeth in the centre of the labrum including the mid-piece.

There is no separate forcipular tergite, that being fused with the first trunk tergite and usually referred to as T1. This tergite has a conspicuous series of sutures on it in *C. anomalans*, forming a diagonal cross shape (cruciform suture) and is best seen on a dry specimen with the light at an angle. The forcipular coxosternite is about twice as broad as long, narrowed posteriorly and with more or less protuberant anterior borders between the poison claws with several stout setae. The poison claw has a smooth concavity and an inconspicuous basal node.

There are 21 trunk segments, each bearing a pair of legs gradually increasing in size to the 20th. The tergites show an alternation of small and large in the anterior region but this is far less marked than in *Lithobius*. The last trunk segments bear legs markedly larger than the others and there is a tendency for these to be shed. Since these legs are very valuable in diagnosis of species they should be kept with the specimen if at all possible; they are one of the most reliable ways of separating our species.

On the last pair of legs the coxal pores are small and very numerous and confined to a well-defined ventral area, the cribriform area. The distribution of spines and setae in relation to this may be important. The remainder of the leg comprises five articles (there is no trochanter); the ventral margins of the tibia and tarsus bear serrate combs which, when the leg is flexed, are opposed to one another to grasp prey. The characteristics of these combs are valuable in separating the three species. Unfortunately these legs have a tendency to flex up when animals are preserved; it may be helpful to straighten these out once the animals are killed before they become fixed in position to make future examination easier.

The terminal segments are poorly chitinised and the sexual structures are of limited value in identification. Illustrations of our species are found in Eason (1964).

DESCRIPTIONS OF SPECIES

Cryptops anomalans Newport 1844

- Maximum length : Up to 50mm, a large and impressive animal.
- Head : Longitudinal sutures complete, extending back from bases of antennae to posterior border of head.
- Labrum : Side pieces not notched at medial angles.
- Forcipular coxosternite : Anterior border Slightly protuberant, two prominent short setae on each side.
- Tergite 1 : With a distinct cruciform suture, often enclosing a small area at its centre in the centre of the tergite and extending almost to the posterior border. This is usually seen best with the light at a slight angle and the specimen fairly dry.
A faint incomplete posterior transverse suture may be visible.
- Last legs : Cribriform area extends almost to the posterior border of the coxa, several smaller coxal setae among the pores.
Prefemur usually without a distinct ventral groove.
Tibial comb with 7 - 10 well spaced teeth.
Tarsal comb with 3 -5 teeth borne on a slight eminence.

Diagnostic features : *C. anomalans* is distinguished by the characteristic tergite 1 suture as well as those on the head and the shape of the forcipular coxosternite border. On the last legs, the coxae and the tibial and tarsal combs. It is frequently of a large size.

Distribution : An animal mostly of synanthropic sites in the south east and the west (including South Wales). It appears to be very widespread in suburban gardens and similar sites in the Greater London area. Not yet recorded from Ireland or from the Channel Islands.

Cryptops hortensis Donovan 1810

- Maximum length : 30mm, often much smaller.
- Head : Longitudinal sutures very incomplete, extending a short way back from the base of the antennae, absent posteriorly.

- Labrum : Side pieces not notched at medial angles.
- Forcipular coxosternite : Anterior border barely protuberant, about 4 setae on each side
- Tergite 1 : Without distinct sutures although an incomplete posterior transverse suture may be visible.
- Last legs : Cribriiform area does not extend to posterior border of coxa; only one coxal seta among the pores.
 Prefemur with distinct ventral groove
 Tibial comb with 5 - 8 separate teeth
 Tarsal comb with 2 - 4 separate teeth.

Diagnostic features : Tibial and tarsal combs of last legs are best, also the coxae of the last legs, labrum (difficult to see without clearing or dissection), anterior border of forcipular coxosternite. *C.anomalans* is distinguished by T1 sutures, *C.parisi* may be more difficult.

Distribution : The commonest species of the genus in Britain, common in synanthropic sites, especially in the south but recorded from a wide variety of habitats there also including woodland. Essentially synanthropic in more northerly localities up to southern Scotland. Ireland. Channel Islands

***Cryptops parisi* Brolemann 1920**

- Maximum length : 30mm or more, much larger than *C. hortensis* typically but not as large as the largest *C. anomalans*.
- Head : Longitudinal sutures incomplete, extending a short way back from the bases of the antennae and a short way forward posteriorly.
- Labrum : Side pieces notched at medial angles so that there appears to be five teeth in the centre of the labrum including the mid-piece.
- Forcipular coxosternite : Anterior border narrower and more protuberant than in the other species, about 4 setae on each side, rather stouter than in *C. hortensis*.
- Tergite 1 : Similar to *C. hortensis*.
- Last legs : Cribriiform area extends almost to the posterior border of the coxa; several coxal setae among the pores.
 Prefemur without a marked ventral groove
 Tibial comb with 7 - 10 closely set teeth
 Tarsal comb with 4-6 closely overlapping or even fused teeth.

Diagnostic features : Tibial and tarsal combs of last legs are best, coxae of last legs, labrum (difficult to see without clearing or dissection), anterior border of forcipular coxosternite. Distinguished from *C. anomalans* by tergite 1 sutures, immatures with fewer tibial and tarsal teeth can sometimes be quite difficult to distinguish from *C. hortensis*.

Distribution : An animal of synanthropic sites, mostly in the south but it has been recorded from woodland in the south west. Recorded as far north as Edinburgh and found in southern Ireland.

DICHOTOMOUS KEY TO THE BRITISH SPECIES OF *CRYPTOPS*

1. T1 with a conspicuous cruciform structure and head with complete longitudinal sutures. Tibial comb with 7- 10 well spaced teeth and tarsal comb with 3 - 5 teeth on a slight eminence. Animal up to 40 mm long.....*Cryptops anomalans*
 - T1 without a cruciform suture, sutures on head (if visible) incomplete.....2
2. Paired longitudinal sutures at posterior margin of head. Tibial comb with 7 - 10 closely set teeth and tarsal comb with 4 - 6 teeth closely overlapping or fused together. Anterior border of forcipular coxosternite relatively narrow and protuberant. Prefemur without a distinct ventral groove. Often quite large animals.....*Cryptops parisi*
 - No such sutures at anterior margin, only anterior ones. Tibial comb with 5 - 8 and tarsal comb with 2 - 4 distinctly separate teeth. Prefemur with a distinct ventral groove.....*Cryptops hortensis*

OTHER EUROPEAN SPECIES

Cryptops savignyi Leach 1817

The species keyed out as this in Demange (1981) is clearly that known to British workers as *Cryptops anomalans* Newport, which Brolemann (1930) treats as a junior synonym of *C. Savignyi*. Brade-Birks (1934) notes Brolemann's treatment of *C.anomalans* as a synonym of *C.savignyi* and Matic (1972) describes the species as *C.anomalans* including Brolemann's *C. savignyi*. Attems (1930) regards *C. Savignyi* as a synonym of *C. hortensis* a view with which Brade-Birks and Matic concur. Demange (1947) distinguished *C. anomalans* and *C. savignyi* the separation being based on antennal characters, one ring of setae at the bases of the 10th article for the former compared with two for *C. savignyi* and *C. savignyi hirtitarsus*. Serra (1985) considers the three forms as being one species.

***Cryptops trisulcatus* (Brolemann 1902)**

This species, which can be up to 35mm has tibial combs of 9-13 teeth and tarsal combs of 4-5. The sutures on the head are discontinuous and the sutures on tergite 1 are parallel or converging, never forming a cross. There is a drawing of this in Demange (1981). It is recorded from the Pyrénées Orientales and Alpes Maritimes in southern France, Italy, Corsica, Roumania, Spain, Portugal, North Africa, Canary Islands.

***Cryptops punctatus* C.Koch 1847**

This species, recorded from Czechoslovakia by Folkmanova (1928) is synonymous with *C. anomalans*.

Other species recorded from southern areas of Europe include: *Cryptops croaticus* with similar sutures to *C. anomalans* as described by Matic (1972) and with a distribution encompassing central and south-west Europe; *Cryptops runceri* Croatia, Austrian Tyrol, Slovenia (Matic, 1979); *Cryptops illyricus* Slovenia (Kos, 1990); *Cryptops umbricus* Croatia (Kos, 1990) and *Cryptops hispanus* Spain (Garcia-Ruiz 1992).

Foddai *et al* (1995) note *C. anomalans*, *C. croaticus*, *C. garganensis*, *C. hortensis*, *C. illyricus*, *C. lobatus*, *C. parisi*, *C. punicus*, *C. trisulcatus* and *C. trisulcatus* from Italy. There are further species from Greece, etc.

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