

A stridulatory organ in *Antistea elegans* (Blackwall, 1841) (Araneida, Agelenidae)

by

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Stridulatory organs are known in several families of spiders. They appear, however, to have been developed in quite different parts of the animal. The apparatus consists of one or more teeth, or in some cases of one or more spines, which face a corrugated surface. Stridulation is achieved by moving one part in regard to the other.

In the Micryphantidae and the Linyphiidae the chelicerae bear on the outside a number of parallel ridges, the stridulating files; a small tooth on the inside of the femur of the palp completes the apparatus. By moving the palpi up and down stridulation will be brought about. Probably this act produces a "sound", but it will also cause a vibration of the web. The species of the two families mentioned above are web-dwelling species, with very restricted visual sensibility, if any at all, but they are very sensitive to vibration. The stridulation presumably plays an important rôle in courtship. The apparatus does not occur in all species of the two families, but it is quite common. It occurs both in males and in females, but in the latter it is generally more pronounced.

LOCKET & MILLIDGE (1957, p. 487) have reported a different kind of stridulatory organ in the genus *Porrhomma* Simon (1884), which also belongs to the family Linyphiidae. In this case the stridulating file is to be found on the posterior side of coxa I; some stout hairs are situated on the anterior side of trochanter II.

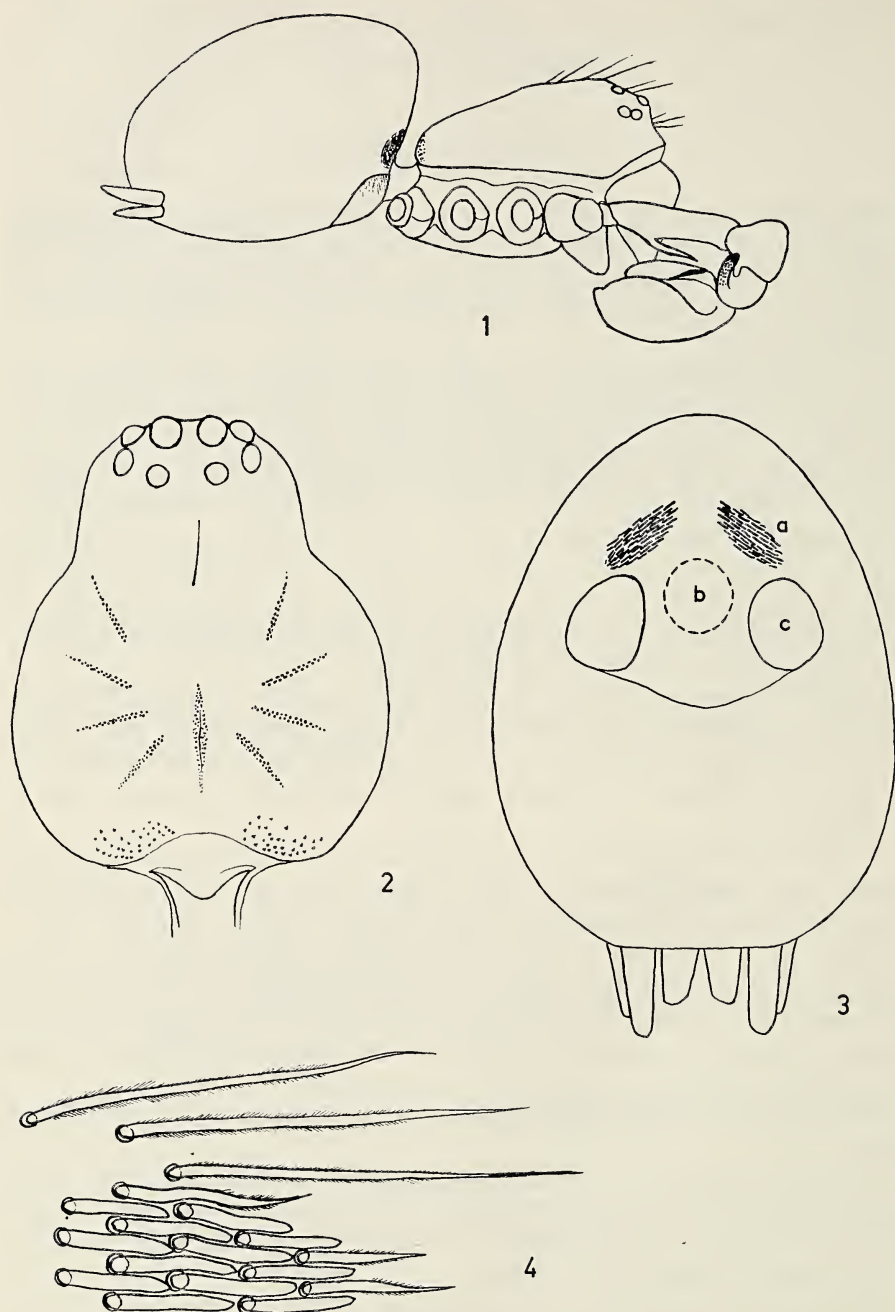
A third kind of stridulatory organ is known from the genus *Gongylidiellum* Simon, 1884 (Micryphantidae), where a tooth occurs on coxa IV, whilst the branchial operculae show transversal ridges (WIEHLE, 1960, p. 485, fig. 900).

In the family Theridiidae the file is situated in the posterior part of the dorsal surface of the cephalothorax, which faces a chitinous collar with fine teeth on the anterior side of the abdomen. It has been described from the males of several genera, viz. *Asagena*, *Steatoda*, *Lithyphantes* and *Crustulina* (WESTRING, 1843, and others); in these genera it occurs in the males only.

The stridulatory organs in the Mygalomorphae and Sicariidae are not discussed here.

I have now discovered a similar organ in *Antistea elegans* (Blackwall) of the family Agelenidae. It occurs in both males and females, and even seems to be a little more pronounced in the female (!). I possess, however, only a few specimens, so this cannot be stated with certainty.

The apparatus is situated on the cephalothorax and the abdomen, as in *Asagena*, but its position is reversed (fig. 1). On the dorsal surface in the posterior part of the cephalothorax there are some scattered small warts or dents (fig. 2). Facing this there are, on the anterior surface of the abdomen, two very conspicuous spots, covered with broad and blunt hairs, neatly set in rows (fig. 3, a). High magnification reveals the flattened appearance of the hairs. They are much shorter



Figs. 1—4. *Antistea elegans*, ♂: 1 male, lateral aspect, 25 $\times$; fig. 2, cephalothorax, dorsal aspect, 43 $\times$; fig. 3, abdomen, ventral aspect, 43 $\times$ (a, abdominal part of stridulatory organ; b, petiolus; c, branchial operculae); fig. 4, detail showing normal, specialized and intermediate hairs, 350 $\times$.

than the plumose hairs covering the remainder of the abdomen. Moreover they are placed very closely, forming a compact layer or shield, thus replacing the file known from the other groups; the ridges are formed by the alternation of hairs and interstices (fig. 4). The marginal hairs sometimes have an intermediate form being longer, more pointed and partly plumose. Stridulation probably will be caused by moving the abdomen up and down.

I have also investigated the species of the genus *Habnia* C. L. Koch (1841), which is closely related to *Antistea*, and the other genera of the family Agelenidae. A similar organ is, however, not present there, so it is an isolated case in this family.

It will be of interest to observe the courtship in this species, when presumedly this organ will be used.

References

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Entomologische Notities VI

door

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Sedert verscheidene jaren heb ik U in de Entomologische Berichten geen mededelingen gedaan over mijn vangsten in die periode. Desalniettemin deed ik enkele waarnemingen, welke mogelijk voor anderen van belang kunnen zijn, niet altijd even spectaculair, maar misschien faunistisch bruikbaar. Tot eind juli 1952 heb ik veel avondvangsten te Waardenburg gedaan, nadien zijn het slechts sporadische vangsten, meest dieren, die 's morgens nog in de buurt van de lampen zaten of in de gebouwen waren binnengevlogen. Sedert eind augustus 1952 werd Bilthoven mijn woonplaats, waar mijn vlindermateriaal werd verrijkt met dieren uit dit geheel andere milieu, welke 's avonds mijn werkkamer binnen vlogen, doch naderhand met dieren, welke op reclamekasten met T.L.-verlichting aan het station werden aangetroffen. Hierover heb ik een aparte aantekening toegevoegd. Daarnaast ontving ik natuurlijk ook een aantal dieren van belangstellenden.

Ik wil mij hier eerst beperken tot de belangrijkste vondsten, waarbij ik (A) Waardenburg en zijn omgeving met zware klei, weiden, boomgaarden, grienden en rietlanden apart zal behandelen van (B) Bilthoven met zandgrond, loof- en dennenbossen.

A. Waardenburg. a. *Coleoptera*. In 1951 vermeldde ik een vangst van *Carabus (Morphocarabus) monilis* F. uit Waardenburg. Begin mei 1952 had ik op een warme, iets regenachtige avond het idee, dat het wel eens *monilis*-weer kon zijn. Onder de grote lichten van het militaire kamp zag ik al dadelijk enkele