

A Note on the Occurrence and the Biology of *Astata minor* Kohl (Hymenoptera Sphegidae)

by

G. VAN ROSSEM

On a short inspection of a southern exposed roadside in the immediate neighbourhood of my house at Wageningen on 6-VII-1944 at about 12.30 p.m., I saw a large Sphegid alight. After an orientation the insect disappeared in a hole and I decided to await further developments. Within a minute the head appeared at the entrance, but the insect seemed to perceive my vicinity and disappeared immediately. I increased the distance a little and caught a glimpse of the abdomen by which a small quantity of sand was pushed to the entrance. There upon the animal disappeared again, but did not return. I waited for nearly half an hour but nothing further happened. To my disappointment I could not spend more time waiting and as I did not recognize the wasp, I started to dig out the nest. The 1 cm wide entrance, which resembled strongly the nest entrance of *Tachysphex nitidus* Spin., narrowed backwards a little; the tunnel continued in fairly horizontal direction in the ground. Soon I encountered the wasp, which I took with my exhauster; only 1 cm further on I found a $\frac{1}{2}$ cm large brown bug larva lying in the tunnel, which in my opinion the wasp had just brought in. At the end of the short tunnel (about 5 cm) I found a second bug larva, which appeared to me belonging to the same species as the first found. In spite of my attempts to gather further notes on the construction of the nest I could not find anything else. I dug off the immediate surroundings of the nest, but found no cells and stopped the work.

Afterwards the animal proved to be a female of *Astata minor* Kohl. Bouwman (1) 1927 does not record the species for our fauna, but supposes the possibility of the occurrence in southern Limburg, as it was taken in the immediate neighbourhood of our frontier (Liege, Belgium). The first record of *Astata minor* for the Dutch fauna we acknowledge to Benno (2) He took a female specimen at de Bijvanck (Lijmers) on 24-VII-1941, more records of the species in our country I have not come across, but according to the communication of Verhoeff, he and Benno took two female specimens at de Bijvanck (Lijmers) on 17-VII-1944. Later on I have compared both specimens with my own and found them absolutely identic.

Gravestein, Amsterdam, was kind enough to identify the bug larvae, which I collected in the tunnel. According to him both specimens belong to *Sehirus*¹⁾ *bicolor* L. (*Hemiptera-heteroptera*). Gravestein noted repeatedly larvae of this bug and informs me in his letter that the species is rather abundant on all kinds of plants in our country.

The larvae turned out to be nearly adult, they are of equal size. According to Butler (3) *Sehirus bicolor* is commonly obtained by sweeping the roadside vegetation in country lanes.

In the immediate neighbourhood of the nest observed by me, there is found a very suitable vegetation for these bugs and I have no doubt about my wasp collecting her prey on these plants.

As Butler (3) says, *Sehirus bicolor* occurs throughout Europe and

¹⁾ Ferton (6) records *Sehirus dubius* Scop. (he writes *Schirus*) as the prey of *A. minor* at Angers. *Sehirus dubius* is not found in Holland, however, it is interesting that *Astata minor* seems to give preference to the genus *Sehirus*.

in Siberia, Turkestan and the North of Africa ; in Britain it is apparently the most widely distributed species of the genus.

Whereas *A. stigma* Panzer leaves her nest during absence uncovered and enters with her prey without delay (Bouwman (1) pag. 50), *Astata boops* Schrank covers her nest entrance ; so she must deposit her prey in order to open the entrance (Bouwman (1) ib.). It turned out to me that the third species in our country (*minor* Kohl) leaves her nest entrance open while absent, so that she can enter without delay.

According to Kohl (4) page 439 *Astata minor* is less abundant than *Astata boops* ; he records the appearance of the species in Belgium, France, Germany, Switzerland, Austria-Hungary and Russia.

De Beaumont (5) page 407 records *Astata minor* as being very scattered in the Palaearctic Region. According to his communication *Astata minor*, such as *Astata boops* is in Switzerland nowhere abundant.

In our country two localities are now recorded ; I suppose the species will not prove to be abundant with us, but still we can be practically sure that other localities exist.

I controlled the locality at Wageningen as much as possible but did not see anymore specimens. The weather-conditions were generally rather unfavourable for Sphegids during the months of June and July 1944, besides the roadside got rather overgrown with grass so that it possibly offered a less favourable opportunity to settle.

The only specimen (♀) which was taken by me as well as both the bug larvae are in my collection.

Verhoeff, den Dolder (Utr.), was kind enough to assist me with the identification of the specimen and lent me both his specimens of *A. minor* (which were recently taken by Benno and Verhoeff at de Bijvanck (Lijmers)). I compared my specimen as well with specimens of the species *A. boops* Schrank from the collection Verhoeff.

LITERATURE.

1. Bouwman, B. E. De Graafwespen van Nederland, I. Sphegidae. De Levende Natuur, 1927, afl. 2, pag. 49—50.
2. Benno, P. Over een kolonie van het papaverbijtje (*Osmia papaveris* Latr.) en eenige andere zeldzame Aculeaten in de Lijmers. Entomologische Berichten, no. 247—249, deel XI, 1943, pag. 65.
3. Butler, Edw. A Biology of the British Hemiptera-Heteroptera, London, 1923, pag. 30—32.
4. Kohl, F. F. Die Gattungen und Arten der Larriden (Aurorum). Verhandlungen der k.-k. zoologisch-botanischen Gesellschaft in Wien, 1884, Bd., XXXVI, pag. 327.
5. Beaumont, J. de, Etude des *Astata* (Hym. Sphegid.) de la Suisse avec quelques notes sur les espèces de la faune française. Mitteilungen der Schweizerischen Entomologischen Gesellschaft, 1942, Bd. XVIII, Heft 9/10, pag. 401.
6. Ferton, Ch. Notes détachées sur l'instinct des Hyménoptères mellifères et ravisseurs avec la description de quelques espèces. Annales de la Soc. Entomologique de France, 1901, Vol. LXX, pag 102—104.

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