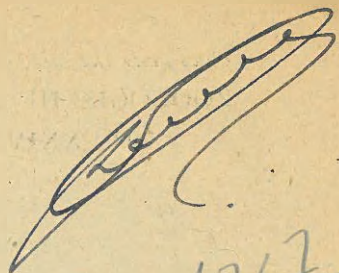


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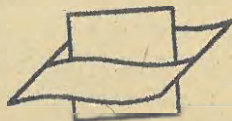
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ON THE OCCURRENCE OF *HELICIGONA*  
*LAPICIDA* (L.) (MOLLUSCA GASTROPODA)  
IN THE NETHERLANDS

by

A. D. J. MEEUSE and W. VERVOORT

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During a visit to southern Limburg in the summer of 1942 several living specimens of *Helicigona lapicida* (L.) were discovered near Kamerig. In this locality the species was found in such large numbers that it seems almost astonishing that its occurrence in such abundance there had hitherto escaped attention. So far the occurrence of undoubtedly living specimens of this characteristic snail in the Netherlands has only been reported by Vervoort (1941), who recorded specimens from a couple of localities also situated in southern Limburg, where, however, the species had only been found in small numbers.

Henrard and Koumans (1936) had previously drawn the attention to the occurrence of more or less fossilized specimens in various localities in the same region. They mentioned shells found in situ in the disintegrated stratum immediately covering the cretaceous layers which come to the surface in numerous places in the province of Limburg (e.g., specimens from Gronsveld), as well as shells apparently washed from this stratum by the rain (e.g., specimens found at the base of cretaceous slopes near Epen). All these specimens are reported to be more or less corroded, calcareous and deprived of their periostracum, though the original colour is often vestigial and represented by pale purple transverse bands. These authors, failing to discover a single living snail, consequently concluded that *Helicigona lapicida* is not indigenous and that it occurs only in a subfossil state.

Other localities have been given by Van Benthem Jutting (1927, 1933). In her first paper *Helicigona lapicida* is marked with a †, which means that no living specimens were collected. The localities mentioned are: Bloemen-daal (in the province of North Holland), St. Pieter and Berg en Terblijt



(in the southern part of the province of Limburg). Near Bloemendaal the species must have been collected somewhere in the dunes and it would seem, therefore, that its presence there was merely incidental and that the shells were introduced from elsewhere. Mr. L. P. Pouderoyen informs us that he discovered in the "Natuurhistorisch Museum" at Rotterdam specimens of *Helicigona lapicida* collected long ago by Schepman at Bloemendaal which are of a quite recent appearance and that he is of the opinion, that Schepman actually took living specimens. There is no further proof of this, however. The Bloemendaal region having thoroughly been investigated from a malacological point of view in the last decades, it is certain that the species does not occur there at present. Still, it may have disappeared there due to a change in the ecological circumstances prevailing at the original locality. This in our opinion is not very likely, so that we, considering the fact that the locality under discussion is far away from the nearest existing locality as well, are inclined to regard Bloemendaal as a secondary locality.

The other localities mentioned by Van Benthem Jutting certainly relate to the calcareous slopes at St. Pieter near Maastricht and to those along the small river Geul near Berg en Terblijt, that is to say to localities of the same character as mentioned by Henrard and Koumans and suggesting a subfossil origin of the specimens collected. Both localities are very renown and are often visited by students of the flora and fauna of this interesting part of our country, so that the actual occurrence of living *Helicigona lapicida* in these places cannot possibly have escaped attention.

The occurrence of *Helicigona lapicida* in the Netherlands was already reported by Ubaghs as early as 1883. On page XXXIV of his paper (Ubaghs, 1883), which is an enumeration of the mollusk fauna of the region of Maastricht, we find the following statement: "*Helix (Chilostrema) lapicida*, Linné, Maastricht, Geulem. Sous les tas de pierres, dans les bois, rare". This record of the species under heaps of stones seems to indicate that living specimens were observed. Since no authentic specimens collected by Ubaghs are known to exist, Ubaghs's records have always been taken with much reserve and, as far as *Helicigona lapicida* is concerned, have usually been considered as relating to subfossil shells only. The recent discovery of living specimens of the species in three localities in the same region, although not in exactly the same places as originally reported by Ubaghs, has brought the old record under a new light.

In the following localities living specimens of *Helicigona lapicida* have so far been collected. (For an accurate indication of these localities the method introduced by the I.V.O.N. (Instituut voor Vegetatie-Onderzoek in

Nederland) and recently adopted for malacological investigations by the Nederlandsche Malacologische Vereeniging (cf. Correspondentiebl. Nederl. Malacol. Ver., no. 9/10, Dec. 1937, pp. 50-66) has been followed here):

Locality I. Diependaal, near Epen, V6, **43**, 34, eastern edge of Onderste Bosch.

A single juvenile living specimen was collected there in July, 1938 by W. Vervoort (1941, p. 51). This was the only specimen, apart from several apparently subfossil ones, found in that locality. It was taken amongst ivy (*Hedera Helix* L.), covering a thick layer of more or less disintegrated cretaceous lime-stone. The specimen died afterwards and its shell is now in the collection of the Rijksmuseum van Natuurlijke Historie at Leiden. In the same locality were collected: *Cochlodina laminata* (Mont.), *Clausilia bidentata* (Ström), *Zenobiella incarnata* (O. F. Müll.), *Trichia hispida* (L.), *Gonyodiscus rotundatus* (O. F. Müll.), *Helicodonta obvolvata* (O. F. Müll.) and *Ena obscura* (O. F. Müll.). During a visit about two months later and in July, 1942 no more living specimens could be found, nor by us, neither by others exploring the place.

Locality II. Bemelen, V6, **21**, 34, on a small brick wall covered with ivy. Several living adult and young specimens were found there on various occasions. On a rainy day in August, 1938 a total of some 10 fully adult snails were observed creeping round on the ivy by G. Monnikendam, H. Odé, W. Vervoort and A. van Wijngaarden. One of these specimens was collected by H. Odé and is now in his collection.

In May 1939, the weather being very dry, only a single adult specimen was collected in the same locality by A. D. J. Meeuse. The shell is now in the collection of Dr. J. Th. Henrard.

On June 6, 1942, P. H. Creutzberg collected 2 living specimens, again in exactly the same place. In addition 5 empty shells were found. All these shells are now in his collection. In accordance with the exceptional drought this time the specimens were found deeply hidden between the stones of the wall. An empty shell of *Ena obscura* (O. F. Müll.) was found in the same locality.

Locality III. Kamerig, near Epen, V6, **43**, 44, southern edge of Elseter Bosch.

A fair amount of living juvenile and adult snails were found by A. D. J. Meeuse, S. J. van Ooststroom, G. van Rossem and W. Vervoort on July 8, 1942. Specimens from this locality are now in the collection of the



Leiden Museum. They include 2 empty shells and 2 specimens on spirit. These last two were collected alive and were stretched before being preserved. In addition a number of young living snails were taken and we succeeded in transferring them alive. Five of these specimens were presented to Dr. J. Th. Henrard for rearing purposes.

The specimens were found in a population together with *Cochlodina laminata* (Mont.), *Clausilia bidentata* (Ström), *Gonyodiscus rotundatus* (O. F. Müll.), *Zenobiella incarnata* (O. F. Müll.), *Cepaea hortensis* (O. F. Müll.) (including the variety *fuscolabiata* Kregl.) and *Helix pomatia* L., on and at the base of ivy-covered elm-stumps (*Ulmus* spec.).

These three localities, which are rather far apart from one another, attach themselves fairly well to the main area of distribution in Europe as given by Henrard and Koumans (l.c.). Two of them are situated far away from human settlements. We therefore reach the conclusion that

a) the localities in the Netherlands are advanced guards from the main area of distribution in Europe,

b) the species *Helicigona lapicida* (L.) has been living in these localities for a considerable time and is no recent introduction, so that

c) *Helicigona lapicida* (L.) is to be considered as really indigenous.

In the Netherlands *Helicigona lapicida* always seems to be associated with ivy, a fact, too striking to be merely incidental. It is to be expected, therefore, that it has something to do with the ecology of the animal. It is a well-established fact, that the species under discussion is essentially an animal of rocky places, often creeping around in clefts, to which habit it is particularly well adapted by the peculiar shape of its shell. In lack of rocks the animal still prefers some solid substratum and so it is mainly found on trunks of trees (e.g., in the large European beech-woods where it is generally very abundant), under stones and on walls. In ivy-covered places it finds a substratum which resembles a rock with clefts in many respects (especially when the ivy itself is growing on some solid substratum, be it a wall, a trunk or lime stone), for the creeping ivy stems form a close network which is covered by the foliage, providing the sheltering places.

In our country rocky regions and beech-woods of any appreciable extension are almost entirely lacking. One therefore may expect *Helicigona* only on walls (as in Bemelen) or in places where ivy covers some solid substratum (as in the other localities). Such places are by no means rare in the southern part of Limburg, so that in our opinion more localities are likely to be discovered there in future.

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