

ASTACUS LEPTODACTYLUS ESCHSCHOLZ INTRODUCED IN THE NETHERLANDS

by

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With one plate

Until the appearance, in 1970, of the American crayfish *Orconectes limosus* (Rafinesque, 1817) in the Netherlands, only a single species of crayfish was known here: *Astacus astacus* (Linnaeus, 1758). Geelen (1978a, b) provided an extensive discussion on the distribution of the two species.

On 13.vi.1980 the Rijksinstituut voor Visserijonderzoek of IJmuiden (National Institution for fishery Research, RIVO) presented the RMNH a freshwater crayfish with a request for identification. The specimen was caught by a fisherman in a freshwaterpond (named IJ) near Spaarndam, NW of Haarlem, province of Noord-Holland. The pond has an open connection with the Noorzeekanaal, the mostly brackish canal that connects Amsterdam with the North Sea. The crayfish, a male with a carapace length of 49.8 mm (total length 103.6 mm) proved to belong to *Astacus leptodactylus* Eschscholz, 1823 (pl. 1).

A month later a second specimen of the same species was caught with hook and line in the small port of Moerdijk, on the Hollands Diep, province of Noord-Brabant, by Mr. A. van As of Roosendaal. This capture was reported upon in the daily newspaper Brabants Nieuwsblad of 18.vii.1980 in which also a photograph of the specimen was published. The specimen shown in the picture was definitely neither *A. astacus* nor *O. limosus*. Mr. van As, who kept the specimen alive in his aquarium, was kind enough to allow me to examine it, and there can be no doubt that it likewise belongs to *A. leptodactylus*.

Dr. J. F. M. Geelen, University of Nijmegen, confirmed (in litt., 12.viii.1980) that these were the first records of *A. leptodactylus* for the Netherlands; she had expected that it would appear here sooner or later.

A. leptodactylus inhabits eastern Europe (Rumania, Bulgaria, Yugoslavia, Czecho-Slovakia, East-Germany, Poland and Russia). In many countries, for instance France and the Netherlands, it is imported for human consumption, in most cases alive.

Wagler (1937: 218) stated that where *A. leptodactylus* and *A. astacus* occur together, the latter will be crowded out by the first because of its diurnal and less secretive way of life; Bott (1950: 12) reported that *A. leptodactylus* can also live in slightly brackish water.

Since 1973, *A. astacus* is fully protected by the Dutch law. Restaurants and fishmongers consequently are forced to sell the less appreciated *A. leptodactylus*. Remnants of at least two specimens of *A. leptodactylus*, viz. one rostrum, three

chelipeds and a great number of segments of walking legs were found in the pellets of a seagull at Yerseke, province of Zeeland, on 13.xii.1980. These remnants are probably the results of the bird's foraging on the kitchen offal of one of the numerous restaurants at Yerseke. As the water in the surroundings of Yerseke is mostly brackish and salt, and no freshwater crayfishes have ever been reported from the entire province of Zeeland and its neighbouring area's, it is highly unlikely that the crayfishes occurred naturally in the region and were caught by the seagull.

The specimen from Spaarndam (RMNH 32953) and the remnants of the specimens from Yerseke (not yet registered) are in the RMNH-collection, the one caught at Moerdijk is still in the possession of Mr. A. van As, Roosendaal).

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SAMENVATTING

Op 13.vi.1980 ontving het RMNH van het RIVO te IJmuiden een zoetwaterkreeft ter determinatie, welke door een visser gevangen was in het zogenaamde IJ bij Spaarndam. De kreeft bleek te behoren tot de soort *Astacus leptodactylus* Eschscholz, 1823; deze was nog niet eerder in Nederland waargenomen. Op 18.vii.1980 publiceerde het Brabants Nieuwsblad een artikel over een rivierkreeft, die door een sportvisser, dhr. A. van As uit Roosendaal, met een hengel gevangen was. Nadere determinatie wees uit dat ook dit exemplaar tot *A. leptodactylus* behoorde. Sinds de wet op beschermde inheemse diersoorten is *A. astacus* (Linnaeus, 1758) niet meer in de handel. Restaurants en viswinkels zijn zodoende gedwongen om de minder gewaardeerde soort *A. leptodactylus* te verkopen. In verband hiermee is het waarschijnlijk dat de restanten van deze soort, gevonden in een braakbal van een meeuw te Yerseke op 13.xii.1980 afkomstig zijn uit keukenafval van een van de vele restaurants aldaar.

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ADDENDUM

After this paper had been submitted for publication, much additional information about the occurrence of freshwater crayfishes in the Netherlands was received at the Leiden Museum. Reliable records of *A. leptodactylus* are listed below. From discussions with anglers and fishermen it became clear that the

species is not uncommon in the province of Zuid-Holland, especially in the surroundings of the town of Leiden and the lakes near Nieuwkoop. It seems likely that the population has become established, i.e. it is unlikely that all records refer to recently escaped or released specimens.

Additional records of *A. leptodactylus*

16.viii.1980. One specimen, river Berkel between Eibergen and Rekken (province of Overijssel), released; photograph of specimen in RMNH. 1981.

One specimen caught by scuba-diver. Province of Limburg, exact locality and data not recorded. Specimen seen by the author.

22.ix.1982. One specimen caught by angler in the Oude Rijn, Leiden; released.

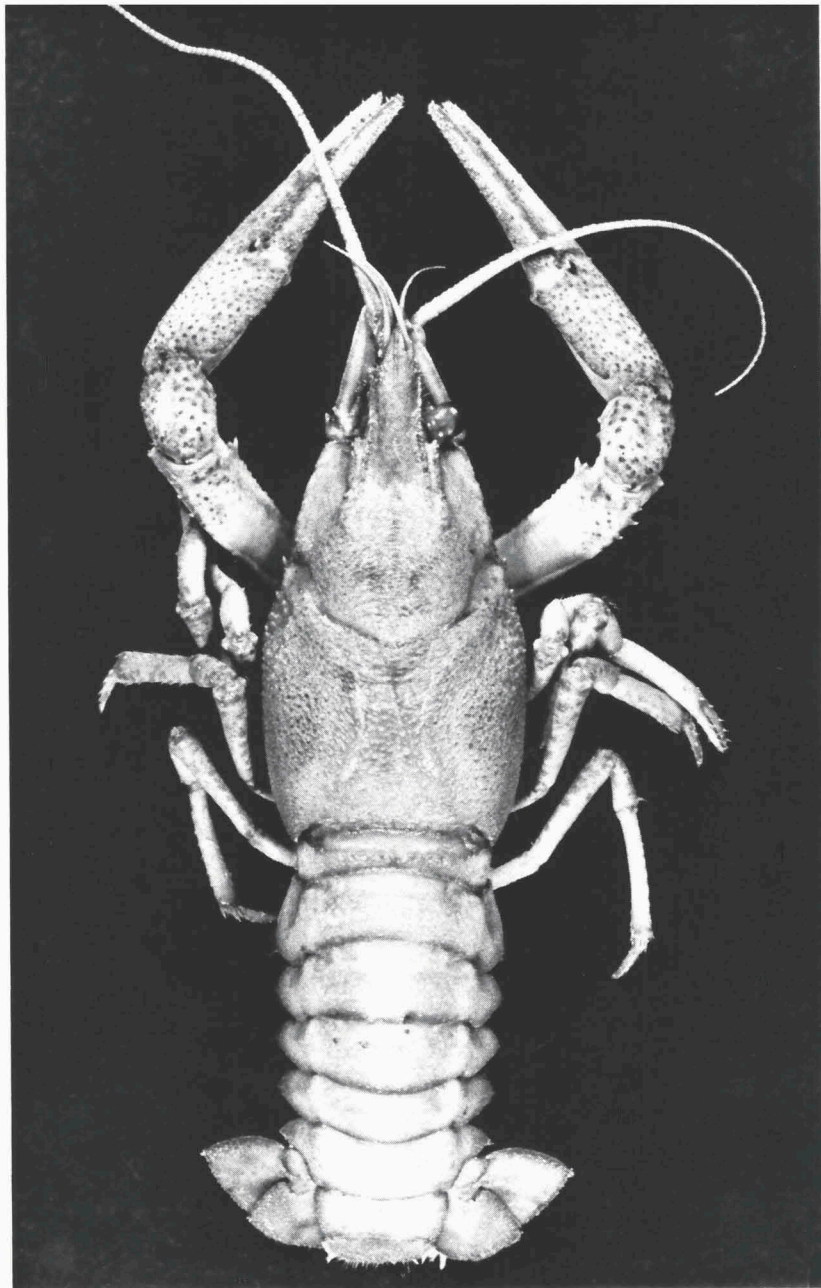
22.ix.1982. One specimen in an eel-basket, Nieuwe Vaart near Lammenschansbridge, Leiden. Specimen in RMNH (not yet registered).

ix.1982. Several specimens in the Oude Rijn near Rijnsburg, province of Zuid-Holland, caught by anglers; released.

2.x.1982. One specimen in the Rijn-Schie-canal between Delft and Rijswijk; released.

9.x.1982. One specimen in the Oude Rijn, Leiden. Specimen seen by the author.

Each day new information becomes available following a request in the anglers magazine "Hengelsport".



Astacus leptodactylus Eschscholz from Spaarndam, 13.vi.1980. (Photo by Mr. A. 't Hooft, division of systematic Zoology, University of Leiden).