

## The round goby *Neogobius melanostomus* first recorded in the Netherlands

Gé C.W. van Beek

Aqua-Life, Hooft Graaflandstraat 147, 3525 VR Utrecht, Netherlands,

E-mail: g.c.w.van.beek@planet.nl

Received 11 January 2006; accepted in revised form 25 January 2006

### Abstract

In December 2004 two specimens of round goby, *Neogobius melanostomus* were caught in the river Lek near Schoonhoven (The Netherlands), which is a first record of this invasive Ponto-Caspian fish in the North Sea basin. After this first observation many individuals have been caught on different locations in the western part of the country. As in the North American Great Lakes and the Baltic Sea, the native fish species could become locally endangered due to competition with new invader. Therefore, the species should be monitored closely to determine its present distribution area as well as the impact on the ecosystem.

**Key words:** *Neogobius melanostomus*, round goby, Netherlands, distribution, invasive species

### Introduction

In December 2004 the round goby was for the first time recognized in the Netherlands. The Dutch name is Zwartbekgrondel (*Neogobius melanostomus* Pallas (1811) (Miller 2003, Berg 1947). In other parts of the world this fish has been invasive already with probably strong impacts on the ecosystem (North-America - Marsden and Jude 2003, Gulf of Gdansk - Skora et al. 1999, ISSG 2005). What will be the impact of the round goby in Dutch waters?

The round goby (Figures 1 and 2) originally inhabited the Ponto-Caspian area (Black, Azov and Caspian Seas), where the fish has commercial value.



Figure 1. Round goby, total-length 14 cm (G.C.W. van Beek).



Figure 2. Head of Round goby; note the skin between the pelvic fins (G.C.W. van Beek).

The species has been given 16 synonym names (Miller 2003). In the Netherlands the fish could be mistaken with *Cottus gobio*, *Gobius niger*, and *Proterorhinus marmoratus* and is related to *Pomatoschistus minutus*, *Pomatoschistus microps*, *Gobius niger*, *Aphia minuta* and *Gobius paganellus*.

### Records

The first specimen from Dutch waters was caught and affirmed in December 2004 in the river Lek near Schoonhoven, 51°56.5'N, 4°51.1'E.

From that moment the OVB got many reports of the species and could often affirm the findings by using the digital photographs send by the fishermen. In many large and estuarine waters the species has been caught. In the Netherlands round gobies seems to favor brackish waters. It is not clear how the species reached the Netherlands. Probably the species was introduced with ballast water releases from ships as assumed for other immigrants (Skora et al. 1999).

### Discussion

According to Charlebois et al. (1997) I assume that the round goby will establish in the Netherlands and that an ecological effect can be measured. Possible impacts may include competition for food and space with fishes like other gobies (see above) but also with *Cottus gobio* and *Platichthys flesus*. These species could become less abundant and possibly disappear locally when the Round goby will reproduce successfully. Monitoring the Round goby will be crucial to know the effects of it's introduction.

### References

- Berg LS (1949) Freshwater fishes of the U.S.S.R. and adjacent countries. Vol. III, Fourth improved and augmented (translated from Russian in 1965)
- Charlebois PM, Marsden JE, Goettel RG, Wolfe RK, Jude DJ and Rudnika S (1997) The round goby, *Neogobius melanostomus* (Pallas), a review of European and North American literature. Illinois-Indiana Sea Grant Program and Illinois Natural History Survey. INHS Special Publication No. 20
- ISSG (2005) Invasive Species Specialist Group global invasive species database: *Neogobius melanostomus* (fish). Species Survival Commission (SSC) of The World Conservation Union (IUCN). URL: <http://www.issg.org>
- Marsden JE and Jude DJ (2003) Round gobies invade North America. Ohio State University Fact sheet no. 65
- Miller PJ (ed) (2003) The Freshwater Fishes of Europe. Vol. 8/1, Mugilidae, Atherinidae, Atherinopsidae, Blenniidae, Odontobutidae, Gobiidae 1
- Skora K, Olenin S and Gollasch S (1999) *Neogobius melanostomus* (Pallas, 1811). In: Gollasch S, Minchin D, Rosenthal H, Voigt M (eds) Case histories on introduced species: their general biology, distribution, range expansion and impact, pp. 69-73, Logos-Verlag, Berlin