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Exotic shells in our seas

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Abstract: A couple of empty shells of non-native species are collected by fishermen offshore the British coast. The condition of those alien shells suggest they were thrown overboard as waste.

Introduction: Fishermen who keep aside shells for us found a *Tectus niloticus* (Linnaeus, 1767) and a broken *Charonia tritonis* (Linnaeus, 1758) in the Channel between France and England. A retired fishermen procured a *Tricornis tricornis* (Lightfoot, 1786) and a broken *Lambis truncata* (Lightfoot, 1786) from off the British coast. Those four species all belong to a more exotic fauna and are foreigners to our seas. We nevertheless want to report about them as a curiosity.

Tectus niloticus (Linnaeus, 1767) - TROCHIDAE Figs 3-5

Remarks: *Tectus niloticus* cannot be mistaken for any other species because of the large and heavy shell with its typical pattern. The shell we report on (102 mm in diameter) was trawled by Belgian fishermen near the Strait of Dover in 2012. It is moderately fresh with a slightly damaged lip and eroded apex. We can only guess about its origin, but we assume it was thrown overboard earlier that year.

Charonia tritonis tritonis (Linnaeus, 1758) -RANELLIDAE

Figs 8-9

Remarks: Charonia tritonis tritonis cannot by mistaken for any other species because of the large shell with its

typical pattern. The typical pattern and (traces of) the black colour of the columella are characteristic for specimens from the Indo-West Pacific. The shell (325 mm) we report on was trawled by Belgian fishermen in the British Channel in 2011. It is moderately fresh ventrally and faded dorsally. The shell was filled with fine sand and many fragments of shells that are typical of a rather shallow water fauna (*Macoma balthica, Ensis directus*, a.o.) and overgrown with young barnacles of *Balanus crenatus* Bruguière, 1789, suggesting that the shell was exposed to the water for a short time only. The lip is badly broken, the very fresh fracture suggesting that the shell was damaged during the trawling process. We can only guess about its origin, but we can assume it was thrown overboard earlier that year.

Charonia lampas (Linnaeus, 1758) is known from the British Islands (see Chambers 2008: 116-117), but differs from *C. tritonis* by the pale columella, the stronger shoulder, the usually stronger spiral sculpture, occasionally with broad knobs, the usually opisthocline shaped dots (instead of rather prosocline) and the usually smaller adult size. Chambers (2008: fig. 122) discussed the presence of *C. lampas* off the British Islands but figured an atypical *C. lampas* with a columella more similar to *C. tritonis*.

Lambis truncata (Lightfoot, 1786) - STROMBIDAE Figs 6-7

Remarks: Lambis truncata cannot be mistaken for any other species because of the large shell with its typical, truncated spire whorls. The shell we report on (196 mm) was trawled by Belgian fishermen at 120 m deep in the British Channel many years ago. The fisherman kept the shell among his other shells and treasures he had collected while employed on the vessels. The shell is badly broken and we wonder whether this happened by accident or whether it illustrates intentional damage in order to get the animal out for food. We can only guess about its origin, but we assume it was thrown overboard.

Tricornis tricornis (Lightfoot, 1786) - STROMBIDAE Figs 1-2

Remarks: *Tricornis tricornis* cannnot be mistaken for any other species because of its typical shape. The shell we report on (98 mm) was trawled by Irish fishermen in the Celtic Deep off Milford (Wales) many years ago. The Belgian fisherman who collected the abovementioned *Lambis* could get this specimen from his Irish colleague and kept it among his other shells and treasures. It is still intact, but worn. We can only guess about its origin, but we assume it was thrown overboard.

Discussion: Finding and recording foreign shells may be the start of an erroneous assumption and/or range extension. None of those four species qualify to be called an introduced species because they are single empty shells rather than the representative of a species, an accident or waste rather than a living sample. Discussing the proper terminology for classifying non-native species is beyond the scope of the present paper and we therefore call those four shells "waste".

We can only guess how those four shells arrived on the seafloor so far from their origin, but we assume they were thrown overboard during cleaning aboard a ship, as much trash is discarded along busy sea routes (see Kerckhof 2016: 16).

Sea-snail is popular food and one does not need a lot of fantasy to imagine a cook cleaning the refrigerator with the next port in sight and taking out the trash. We can illustrate this with two more examples: a *Neptunea lyrata* (Gmelin, 1791) trawled offshore Portugal, Algarve, off Manta Rota, - 300 m, and a Neptunea varicifera (Dall, 1907) trawled offshore Lagos, - 400 m, that became listed and figured by Macedo et.al. (1999: 189-190). Both shells are without doubt an accidental introduction or waste, not at least because they look conspicuously similar to the specimens from southern Kuril Islands and southern Sakhalin. We have to agree that both shells were fresh dead, but we cannot agree that they belong to the European fauna (Fraussen & Terryn 2007: 46, 132). Strombidae are popular sea-food and the hypothetical cook is much more likely than any other scenario.

We can also assume that some of those shells were kept as decorative elements and subsequently thrown overboard because they got damaged or by accident. Moreover, tropical shells frequently appear on beaches near touristic centres. For example small polished **Strombidae** shells at the beach of Nieuwpoort (Belgium) and a nice *Euthria cornea* (Linnaeus, 1758) on the beach of Clancton (Essex, England), all originating from souvenir shops and then used as toys on the beach. Both the *Tectus* and the *Charonia* listed above are commonly seen among decorative shells.

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Plate:

- **1-2:** *Tricornis tricornis* (Lightfoot, 1786) 98 mm, trawled in the Celtic Deep off Milford (Wales)
- **3-5:** *Tectus niloticus* (Linnaeus, 1767) 102 mm in diameter, trawled near the Strait of Dover.
- **6-7:** *Lambis truncata* (Lightfoot, 1786) 196 mm, from off the British coast
- **8-9:** *Charonia tritonis tritonis* (Linnaeus, 1758) 325 mm, trawled in the British Channel.

