

IDAS LAMELLOSUS VERRILL, 1882 (BIVALVIA: MYTILOIDEA) A WOODFALL MUSSEL NEW TO THE FAUNA OF THE NORTHEAST ATLANTIC

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Abstract *Idas argenteus* var. *lamellosus* Verrill, 1882 is recorded for the first time from the northeast Atlantic. It is regarded as distinct from *I. argenteus* and given species rank as *Idas lamellosus*. The shell is described from material collected by the Triton expedition of 1882 from the Wyville-Thomson Ridge at a depth of 944 metres. The shells were extracted from sunken wood along with specimens of *I. argenteus*.

Key words *Idas lamellosus*, woodfall, new record, NE Atlantic.

INTRODUCTION

The authors are currently preparing a web site for the identification of all bivalves found within the waters surrounding the British Isles. To prepare the section on the genus *Idas* a sample labelled *Idas argenteus* Jeffreys, 1876, collected from the vicinity of the Wyville-Thompson Ridge, by the Triton Expedition of 1882 was examined and was found to contain two forms. One can be conclusively identified as *I. argenteus* but the other could not be assigned to any previously recognised species from the northeast Atlantic.

This paper describes this species from the Triton sample and makes comparisons with all other species of the genus known from the North Atlantic and Mediterranean: *Idas argenteus* Jeffreys 1876; *Idas argenteus* var. *lamellosus* Verrill, 1882; *Idas ghisottii* Waren & Carrozza 1990; *Idas modiolaeformis* (Sturany 1896: *Myrina*); *Idas pelagica* (Forbes in Woodward 1854: *Modiolarca*); *Idas simpsoni* (Marshall 1900: *Myrina*).

It is concluded that this species is identical to *I. argenteus* var. *lamellosus* described from the north-west Atlantic and should now be recognised at the species level as *Idas lamellosus*.

DESCRIPTION

Genus *Idas* Jeffreys 1876

Type species *Idas argenteus* Jeffreys 1876

Idas lamellosus Verrill, 1882

Idas argenteus var. *lamellosus* Verrill, 1882: 579.

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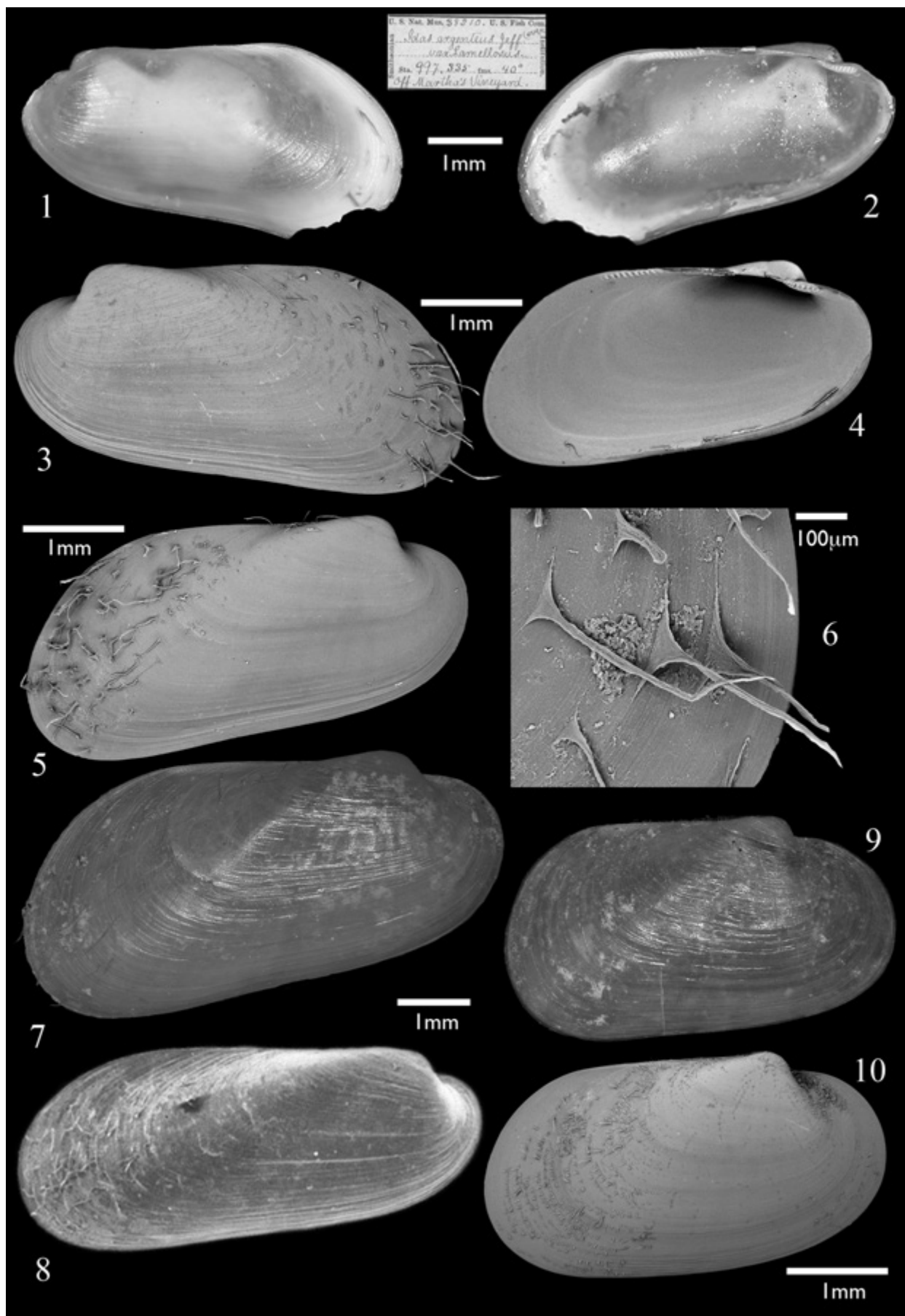
Idas argenteus Jeffreys – Warén, 1980: pl. 7, figs 11-12
Idas argenteus var. *lamellosus* Verrill, 1882– Warén, 1991: 116

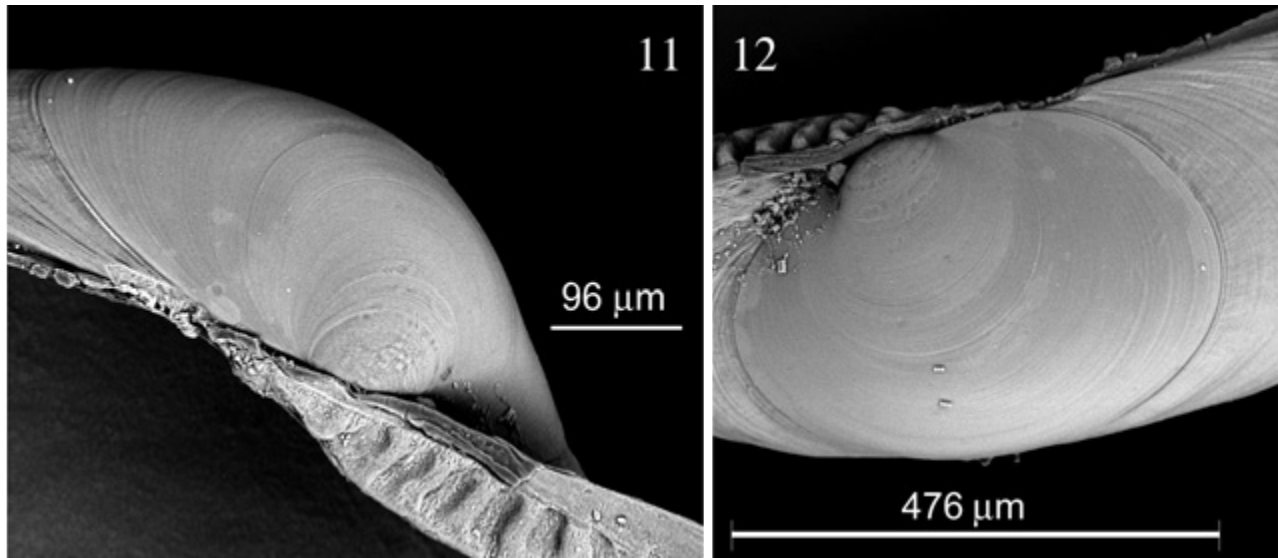
Material examined Holotype: 1 complete shell, Off Martha's Vineyard, Massachusetts, USA, 335 fathoms (649m), U.S. Fish. Comm. Station 997, USNM 38210 (Figs 1-2).

60 shells, off NW Scotland, South-west of the Wyville-Thomson Ridge, 944m, HMS Triton station 10, 59° 40' N 7° 21' W, in warm area bottom temp 46-46.5°F (7.7-8.1°C), 1882, Coll. HK Jordan, leg. JT Marshall/Tomlin NMW.1953.183.m0274/m0248 (Figs 3-7).

Diagnosis Small, fragile, narrow modioliform in shape, silky periostracum with sparse long simple bristles, hinge with fine crenulations anterior and posterior of beaks.

Description Shell to 8mm in length, very fragile, translucent, equivalve. Outline modioliform, beaks close to the anterior margin at about 17% of total length, narrow height to length ratio, posterior slightly expanded, posterior dorsal and ventral margins sub-parallel, posterior margin evenly curved, anterior margin rounded. Hinge plate very narrow, ligament extending for half the length of the posterior dorsal margin. A narrow lens of 10-12 crenulations below and in front of the beaks, 15-20 similar crenulations present on the hinge plate posterior of the ligament and traces e present beneath the ligament. Outer surface smooth with weak concentric growth lines, in some irregular weak radial corrugations are present over the median slope. Periostracum thin, silky, translucent, tan in colour, with sparse, long, simple bristles.





Figures 11-12 SEM of prodissoconch of *Idas lamellosus*

Muscle scars not apparent and no anatomical data could be gathered from the dried remains.

The larval shell (Figs 11-12) has a small prodissoconch I (diameter 96mm) and a very large prodissoconch II (diameter 476mm).

Habitat Attached to sunken wood in deep water bored by shipworms and associated with *Idas argenteus* and *Cocculina spinigera*.

Distribution Known only from the type locality in the northwest Atlantic, and from the Wyville-Thomson Ridge in the northeast Atlantic.

DISCUSSION

Idas lamellosus and *I. argenteus* were found together in the same small piece of wood and the two forms are superficially similar. *Idas argenteus* (Figs 9-10) is less elongate in outline with the beaks set further back at about 25% of the total length and the anterior and posterior curvatures are more equal in size. The periostracal hairs (Fig. 10) of *I. argenteus* are short and stubby by comparison to the fine long hairs (Figs 3, 5-6) present on *I. lamellosus*. Warén illustrated a shell from Triton station 10 (Warén 1980: plate

7, figs 11-12) as *I. argenteus* but this shell has the form and periostracal hairs of *I. lamellosus*. Warén (1991) did not regard Verrill's var. *lamellosus* as distinct from *I. argenteus* but we differ for the reasons given above.

Warén & Carrozza (1990) described *I. ghisottii* from the Mediterranean (Fig. 9, from sunken wood). Their holotype is 11.2 mm in length and somewhat more arcuate and cylindrical in form with the posterior, compared to the anterior, less expanded. However, their shells of similar size (6-7mm) (Fig. 8) to those from the Triton sample are less distinct and bear periostracal hairs of matching dimensions, see Warén & Carrozza 1990: figs 11-12. Relatively little material of *I. ghisottii* is available at this time and no shells of *I. lamellosus* comparable in size to the holotype of *I. ghisottii* are known. Consequently, *I. ghisottii* is not regarded here to be conspecific with *I. lamellosus*, but should they prove to be so then *ghisottii* will become a junior synonym of *lamellosus*.

In outline *Idas lamellosus* is also similar to *I. simpsoni* (maximum length 40mm) but in the latter, size for size, the shell is much thicker, has an arched dorsal margin, the anterior set of crenulations are more robust but fewer in number and the periostracum is glossy and devoid of hairs or bristles.

Figures 1-2 *Idas argenteus* var. *lamellosus* Verrill, 1882; holotype, Martha's Vineyard, USNM 38210. **Figures 3-7** *Idas lamellosus* Verrill, 1882; **Figs 3-5** Scanning electron micrographs of shells; Fig 6 SEM of periostracal hairs. **Fig. 8** *Idas ghisottii* Warén & Carrozza, 1990, reproduced from *Bollettino Malagologico*, 26: 23 fig. 11. **Figs 9-10** *Idas argenteus* Jeffreys, 1876; Wyville-Thomson Ridge, Off NW Scotland, Triton Expedition station 10, NMW.1953.183.275; **Fig. 10** Scanning electron micrograph.

Idas pelagica and *I. dalmasi* (Dautzenberg & Fischer, 1897) were shown to be conspecific by Warén (1991, 1993) and is distinguished by having a smooth hinge plate, an arcuate ventral margin and a proportionately longer anterior area. Warén (1991) also illustrated the syntypes, the only known specimens, of *Myrina modiolaeformis* and conjectured that this species was doubtfully placed in the genus *Idas*. *Myrina modiolaeformis* was illustrated by Olu-Le Roy *et al.* (2004), from methane seeps in the Mediterranean (as *Idas*), where it occurs in large numbers.

ACKNOWLEDGEMENTS

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