

# New records of *Splendrillia* (Gastropoda: Turridae) from northwestern Australia, with the description of a new species

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## ABSTRACT

The known range of *Splendrillia candidula* (Hedley, 1922) is extended from Queensland westward to off Dampier, Western Australia. *Splendrillia persica* (Smith, 1888) is recorded for the first time from Australian waters, and a new species of *Splendrillia* is described from off the north coast of Western Australia and the Northern Territory.

## INTRODUCTION

I recently revised Australian species of the turrid genus *Splendrillia* Hedley, 1922 (Wells, 1990; 1991). Subsequent sorting of additional material at the Australian Museum has disclosed the presence of one undescribed species from northwestern Australia and greatly extended the range of two additional species. This information is recorded in the present paper. Turrids, particularly small species, are poorly known from this area, and it is likely that additional collecting in the future will show that there are a number of additional species.

## SYSTEMATICS

### Genus *Splendrillia* Hedley, 1922

Type species: *Drillia woodsi* Beddome, 1883. (o.d.).

### *Splendrillia candidula* Hedley, 1922

Plate 1, Figures 1-2.

*Clavus candidulus* Hedley, 1922: 255, 256, pl. 45, fig. 47

*Austroclavus candidulus* (Hedley). Cotton, 1947: 1-12.

*Splendrillia candidula* (Hedley). Wells, 1990: 91-92, pl.4, figs. 7,8.

**Shell:** (based on new material). Shell very small, 6 mm, very high spire. Protoconch small, high, rounded, 2 smooth whorls with very fine pitting, 0.60-0.66 mm wide, 0.51-0.60 mm high. Teleoconch of 6-7 convex whorls. Suture fine, indistinct, slightly undulating. Single, low, broad, flat subsutural spiral cord, indistinct on some paratypes. Sculpture dominated by strong, low, broad axial ribs, do not line up on adjacent whorls, begin 1/3 way down the whorl, reach maximum size at midwhorl, lessen but are still strong at lower suture, extend slightly below suture, 6-8 on penultimate whorl, 4 indistinct ribs on upper face of body whorl followed by pronounced varix, which swells left face of whorl, outer surface of body whorl broken in life and subsequently repaired. About 6 indistinct spiral striae just above anterior tip of shell. Shell surface smooth but with uniform fine pitting on some specimens along with faint axial growth lines. Outer lip thickened, edge smooth and slightly incurved, indistinct notch on lower

surface. Sinus subsutural, very deep, at 30° angle to shell axis, entrance strongly constricted by strong callus and outer lip, margins of sinus heavily thickened. Aperture elongate, subrectangular, deep. Columella narrow, smooth, slightly convex, margin callused. Shell truncate, anterior canal short, broad, deep, anterior tip notched. Shell colour uniform glossy white or off-white.

**Measurements:**

	Length (mm)	Width (mm)	Aperture (mm)	W/L	A/L
Holotype	5.3	2.0	2.1	0.38	0.40
AMS C.168133	6.3	2.1	1.9	0.33	0.30
AMS C.168119	6.0	2.2	2.3	0.37	0.38
	5.9	2.1	2.2	0.36	0.37
	5.3	2.0	1.8	0.38	0.34
	5.8	2.1	1.9	0.36	0.33

**Animal:** Not known.

**Type material:** Holotype and two paratypes, AMS C.2675.

**Type locality:** 36 m depth, off Darnley Island, Torres Strait, Queensland.

**New material:** 5 specimens, AMS C.168119. 124 m depth, 160 km N of Croker Island, Northern Territory (9°30'S; 132°34'E). 1 specimen, AMS C.168133. 11 m, off Croker Island, Northern Territory (11°1'S; 132°34'E).

**Distribution:** 11 to 261 m depth, from Croker Island, Northern Territory to off Cape Moreton, Queensland.

**Remarks:** Wells (1990) recorded this species from only the type material and a few additional Queensland specimens. The present material extends its range across northern Australia to off Dampier, Western Australia. The present material agrees in all major features with the type series, including general shape and sculpture, size, structure of the protoconch, and rib structure. The holotype has 5 teleoconch whorls and 8 axial ribs on the penultimate whorl versus 6-7 whorls and 6-8 axial ribs in the present material. Wells (1990) recorded the maximum length of the species as 11 mm.

*Splendrillia candidula* is similar in size to, and sympatric with, *S. westralis* but can be differentiated by being a larger shell, the protoconch lacks the distinct spiral rib of *S. westralis*, and the axial ribs are rounded and not triangular.

*Splendrillia persica* (Smith, 1888)

Plate 1, figures 3-4.

*Pleurotoma persica* Smith, 1888: 307.

*Drillia persica* var. *jacintha* Melvill, 1917: 156, pl. 9, f. 6.

*Splendrillia persica* (Smith): True, 1991: 9 and *S. persica* var. *jacintha* (Melvill): True, 1991: 9.

**Shell:** Shell small, to 8 mm in Australian specimens, very high spire. Protoconch small, 2 whorls, rounded, slightly globose with very fine microscopic pitting, lower whorl with indistinct spiral rib giving outline a triangular appearance, 0.75 mm wide, 0.65 mm high. Teleoconch of up to 7 angular whorls, turreted. Suture distinct, slightly impressed, slightly undulating. Sculpture dominated by strong, narrow axial ribs, which form 1/4 way down whorl, reach maximum by midwhorl, continue to lower suture, tend to line up on adjacent whorls, 8-11 on penultimate whorl, 8-11 on body whorl, extend below shoulder of body whorl but not to anterior tip of shell, distinct



**Plate 1.** Figs. 1-2. *Splendrillia candidula* (Hedley, 1922). AMS C.168133. 11 m, off Croker Island, Northern Territory. 6.3 mm long. Figs 3-4. *Splendrillia persica* (Smith, 1888). AMS C.168134. 238 m, approx. 370 km W of Roebuck Bay, WA (18°30'S; 118°03'E)(AMS C.168134). 7.5 mm long. Figures 5-6. *Splendrillia westralis*. Holotype, AMS C.168124. 112 m depth, 157 km NNW of Pt. Hedland, Western Australia (19°00.8'S; 118°01.3'E). 4.8 mm long.

varix usually be present on body whorl, if so remainder of whorl is smooth. Spiral sculpture absent except for series of about five indistinct striae near anterior tip of shell. Axial growth lines present. Outer lip slightly thickened with faint notch on lower surface. Sinus on midshoulder, very deep, U shaped, margin thickened. Callus strong. Aperture subrectangular, deep. Columella narrow, callused margin. Shell truncate, anterior canal short, broad, deep, anterior tip distinctly notched. Entire shell off-white glossy.

#### Measurements:

	Length (mm)	Width (mm)	Aperture (mm)	W/L	A/L
<i>persica</i>					
BM(NH) syntypes	8.9	2.9	3.3	0.33	0.37
1874.1.19.30	8.4	2.9	3.2	0.35	0.38
	8.6	3.0	3.3	0.35	0.38
	7.0	2.3	2.9	0.33	0.41
AMS C.168134	7.5	2.5	2.5	0.33	0.33
	6.7	2.3	2.5	0.34	0.37
	7.5	3.0	2.8	0.40	0.37

**Location of types:** *persica*: BM(NH) 1874.1.19.30. 4 syntypes.

**Type locality:** Persian Gulf.

**Material examined:** Types. 5 specimens, AMS C.168134. 238 m, approx. 370 km W of Roebuck Bay, WA (18°30'S; 118°03'E)(AMS C.168134).

**Distribution:** Indo-West Pacific: from the Persian Gulf to northwestern Australia.

**Remarks:** The material from Roebuck Bay is the first record of this species in Australian waters. Australian specimens are very similar to the types, slightly smaller, with the same size protoconch, the callus and ribs are similar, but the material differs slightly in that the axial ribs on the front face of the body whorl are not as strong and the body whorl is slightly more pustulose just below the suture.

*Splendrillia persica* is similar to *Splendrillia disjecta* (Smith, 1888) in shell structure: they are of the same size, have the same number of whorls, *S. persica* is slightly narrower, with slightly narrower ribs which do not penetrate as far on the face of the body whorl, and the protoconch is of the same size. A callus is present on *S. persica* but not *S. disjecta*.

### *Splendrillia westralis* n.sp.

Plate 1, Figures 5-6

**Shell:** Shell very small, 5 mm, very high spire. Protoconch high, smooth, 2 glossy whorls, strong spiral rib across centre of whorls, 0.60 mm wide, 0.60 mm high. Teleoconch of 6 angular whorls. Suture distinct, undulating. Sculpture dominated by strong, narrow, triangular axial ribs, begin abruptly 1/4 down whorl, increase rapidly to maximum at midwhorl, decrease but are strong at lower suture, reform as distinct nodule on upper surface of next whorl, just below suture, ribs do not match up on adjacent whorls, 8 on penultimate whorl, 8 on upper surface of first half of body whorl, final rib swollen into strong varix, remainder of body whorl smooth. Surface of shell smooth, axial growth lines indistinct. Outer lip slightly thickened, margin slightly incurved, small notch just above base. Sinus on shoulder, very deep, U shaped, strong callus present both on columella and inside of outer lip. Aperture deep, subrectangular. Columella narrow, slightly convex, margin raised. Shell truncate, anterior canal short, deep, moderate width, anterior tip of shell notched. Shell colour uniform glossy white.

#### Measurements:

	Length (mm)	Width (mm)	Aperture (mm)	W/L	A/L
Holotype AMS C.168124	4.8	1.8	1.7	0.38	0.35
Paratype AMS C.168122	4.5	1.8	1.8	0.40	0.40

**Type material:** Holotype, AMS C.168124. 112 m depth, 157 km NNW of Pt. Hedland, Western Australia (19°00.8'S; 118°01.3'E). Paratypes: 6 specimens (5 broken), AMS C.168122. 110 m depth, 138 km NNW of Dampier, Western Australia (19°28.9-29.0'S; 116°29.4'E); 1 broken specimen, AMS C.168125. 194 m depth, 184 km NW of Broome, Western Australia (16°58'S; 120°47'E).

**Distribution:** Australian North West Shelf at 110-194 m depth from 138 km NNW of Dampier to 184 km NW of Broome, Western Australia.

**Etymology:** This species is named after the geographical area in which it occurs, off Western Australia.

**Remarks:** *Splendrillia westralis* is similar to and sympatric with *S. candidula*, but is

a smaller shell, the protoconch has a distinct spiral rib, the axial ribs are triangular and not rounded, and there is a distinct varix on the left side of the front of the body whorl. It should also be compared with two small species of *Splendrillia* from Queensland. *Splendrillia hedleyi* Wells, 1990 also has an angular shape, but is a larger shell (10 mm long), with a much larger protoconch (0.93 mm wide), and a broader shape. *Splendrillia powelli* (Wells, 1990) is also larger (9 mm) than *S. westralis*, broader with more numerous axial ribs (13 vs. 8). Both Queensland species lack the spiral ridge on the first protoconch whorl which is present on *S. westralis*.

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