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NOTES ON TWO SPECIES OF RHYTIDID SNAILS
FROM
LIZARD ISLAND, NORTH QUEENSLAND

by

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SUMMARY

The systematic position, shell, radula, anatomy and habitat preferences and behaviour of two species of rhytidid snails, *Strangesta franklandiensis* (Forbes, 1852) and *Saladelos hobsoni* (Brazier, 1876) found on Lizard Island, North Queensland are described and compared.

INTRODUCTION

During a recent visit to Lizard Island, North Queensland, the land snail fauna was surveyed, the results of which will be published elsewhere. Two species of snails belonging to the family Rhytididae, *Strangesta franklandiensis* (Forbes, 1852) and *Saladelos hobsoni* (Brazier, 1876), were found to be widespread members of that fauna and as the author is at present engaged on a taxonomic revision of the Australian species of this family, it was decided to take the opportunity to carry out detailed observations of the two species.

Unpublished taxonomic information reveals considerable confusion as to the relationships of the Australian species of this family, including these two species. Iredale (1933) erected many new genera and species for this group. He recognised the larger rhytidid on Lizard as a species described by Forbes (1852) but used it as the type species of a new genus, *Murphitella*. The smaller species was given a new specific name and put into a new genus, becoming *Saladelos lacertina* Iredale 1933. Solem (1959) considered *Saladelos* a subgenus of *Delos* Hutton, 1904 and *Murphitella* as a section of subgenus *Rhytida* s.s. Little or nothing is recorded of the anatomy, habitat preferences or behaviour of these species.

The following abbreviations are used:— AM — Australian Museum, Sydney; BM(NH) — British Museum (Natural History), London; NMV — National Museum of Victoria, Melbourne.

SYSTEMATIC SECTION

Genus **Strangesta** Iredale, 1933.

Strangesta Iredale, 1933: 48. Type species: *Helix leichardti* Cox 1864 (= *confusa* Pfeiffer 1855).

Records of The Australian Museum, 1979, Vol. 32 No. 12, 421-434, Figures 1-6.

Synonym: *Murphitella* Iredale, 1933: 49. Type species: *Helix franklandiensis* Forbes 1852.

Shell large, regularly coiled, globose with spire elevated to flat, impressed sutures and deep open umbilicus, aperture large, lunate. Shell thin, fragile with fine, close, transverse sculpture or sculpture absent or replaced by fine spiral lines dorsally, smooth without sculpture ventrally, often glossy. Colour pale yellow to deep honey brown, uniform or with darker transverse bands. Jaw absent. Radula of long, lanceolate recurved teeth, central small, vestigial, laterals grading in size from the centre with largest no more than twice the size of the smallest, 35 to 60 teeth per row. Reproductive system simple, without talon or flagellum; penis with papillae.

The diagnostic characters which separate the genus *Strangesta* from all other rhytidid genera are the large yellow to brown shell with fine sculpture to smooth without sculpture, and the radula structure of lateral teeth grading in size from the centre to the largest tooth no more than twice the size of the smallest having 35 to 60 teeth per row. Within these criteria is a range of species separated by shell shape and colour and differences in radula and anatomical structure.

Iredale (1933) erected the genus *Strangesta* to accommodate the larger rhytidids from Queensland and northern New South Wales, with *Helix leichardti* Cox, 1864 as type species. However, uncharacteristically, he broadened his concept of the genus (Iredale, 1938, 1943) to include the majority of rhytidids of eastern Australia (18 species) from small highly sculptured forms of southern Tasmania to the large Queensland species. Examination of large series of all Australian rhytidids (Smith — unpublished) has led to the conclusion that several generic groupings are present in Iredale's enlarged genus *Strangesta* and this name is here restricted to the large species of Queensland and northern New South Wales for which it was originally erected. Iredale's choice of *H. leichardti* as type species was unfortunate as the type of this species appears to be lost and the species is here considered a synonym of *H. confusa* Pfeiffer, 1855. However, several of the type specimens of nominal species of these large rhytidids are missing and a full description of the genus, and all the species referable to it, will be published elsewhere.

Solem (1959) considered both *Strangesta* and *Murphitella* to be in the subgenus *Rhytida* s.s. Examination of large series of these species (unpublished) suggests that generic differences in shell and radula structure and anatomical features exist between *Rhytida* s.l. and *Strangesta* s.s. Solem separated *Strangesta* sectionally from *Murphitella* because of the loss of the transverse sculpture in the latter group, it being replaced by fine spiral lines. This character here is not considered of more than specific importance in the restricted view of *Strangesta* taken in the present study.

***Strangesta franklandiensis* (Forbes, 1852)**

Figs. 3a,b,c and 5.

Helix franklandiensis Forbes 1852: 379.

Helix (Rhytida) beddomei Brazier 1876: 98.

Helix (Rhytida) jamesi Brazier 1876: 99.

Murphitella froggatti Iredale 1933: 49.

Murphitella franklandiensis Iredale 1933: 49

DIAGNOSIS: Shell large, thin, fragile with flat spire and wide, open umbilicus. Sculpture of fine spiral lines on the dorsal surface, no sculpture ventrally. Aperture wide, lunate. Colour pale yellow to light yellowy green sometimes with occasional dark yellow to green fine transverse bands, with a high gloss on dorsal and ventral surfaces. Radula of long, lanceolate, recurved, unicuspid teeth with small central and lateral teeth increasing in size gradually away from the centre to a maximum at teeth 19 to 23. Rows end with 2-6

vestigial peg-like marginals. Outer laterals approximately twice the size of the inner laterals. (28-30)-1-(28-30) teeth per row. Penis uniformly covered with small papillae.

DESCRIPTION: The shell is large, thin and glossy with a flat spire, wide deep umbilicus and large lunate aperture. There is no transverse sculpture on the shell but the dorsal surface bears a number of fine spiral lines. The ventral surface of the shell is smooth and glossy without sculpture. The colour varies from pale yellow to greeny yellow and often bears fine transverse bands of darker colour either yellow or green.

When crawling the animal carries the shell almost over the tail with the head and anterior part of body protruding more than a shell diameter in front of the shell. The shell is carried flat, with the dorsal surface almost horizontal and the aperture on the right side of the animal. The long optic and ventral sensory tentacles are carried projecting forward when actively crawling. A second pair of sensory tentacles or latero-ventral extensions of the anterior end of the base of the head is also very prominent when the animal is crawling.

The body is light creamy yellow in colour with dark optic tentacles and a prominent white stripe down the mid-dorsal line of the head and body. This stripe is lost in preserved specimens but is reflected in a wide continuous mid-dorsal skin tubercle band, the remainder of the body bearing large tubercles.

The radula is typical of carnivorous snails (Watson, 1915) consisting of comparatively few rows of large unicuspid lanceolate recurved teeth with a much reduced central tooth and laterals increasing in size to a maximum about two thirds to three quarters of the way to the outer edge of the radula, outside which several greatly reduced laterals or marginals exist. Examination of the radula using the Scanning Electron Microscope (Fig. 5) reveals a radula with (28-30)-1-(28-30) teeth per row, the central being small and slender, the outer 6-8 teeth being minute to vestigial and teeth 19 to 23 in each lateral series being almost twice as broad as any other teeth. The buccal mass is a long, cylindrical, muscular organ occupying almost all the head space and in length is approximately a third to half the diameter of the shell. The nerve ring is situated close to the anterior end of the buccal mass and consequently has long interganglion commissures to accommodate an expansion in the buccal mass during feeding. The oesophagus arises from the mid-dorsal region about a quarter of the way from the anterior end of the buccal mass. The single bilobed salivary gland is situated on the oesophagus on the posterior end of the buccal mass. The large pedal gland is free in the ventral part of the body cavity and passes through the nerve ring.

The genital opening is displaced posteriad on the right side to just in front of the pneumopore. This is a result of the greatly enlarged buccal mass. The everted penis is a short simple organ with the surface covered with short papillae. All the preserved specimens available for study proved to be very immature with regard to reproductive tract maturation, even from 4½ whorl shells exceeding 20 mm diameter. An examination of the collecting data revealed that they were all collected in the dry season from June to early December. This region of North Queensland has distinct wet and dry seasons and it is suspected that reproductive maturation is closely correlated with the wet season, reproductively mature animals only being present in the populations some time after the onset of the wet season. Because of the lack of suitable material no detailed description of the reproductive tract is possible. The reproductive tract appears to be simple, though a small verge may be present. The spermatheca has a long duct and is situated at the distal end of the common duct. The hermaphrodite gland, embedded in the digestive gland in the apical whorls, consists of a series of finger-like processes from a branching duct.

TYPE MATERIAL: Lectotype of *H. franklandiensis* here designated, in British Museum, BM(NH) 1859.3.11.4 from Frankland Island. Dimensions: max. dia. 15.1 mm; min. dia. 12.4 mm; height 5.7 mm. Two paralectotypes, BM(NH) 1859.3.11.3 from Lizard Island. Dimensions of largest specimen: max. dia. 25.5 mm; min. dia. 21.2 mm; height 8.34 mm.

H. (R.) beddomei Brazier — 10 syntypes, AM C87297.

H. (R.) jamesi Brazier — 1 syntype, AM C11107; 4 syntypes, AM C87293.

M. froggatti Iredale — 2 syntypes, AM C87295.

TYPE LOCALITY: Frankland and Lizard Islands, North Queensland, about the roots of trees.

DISTRIBUTION: The species is confined to the coastal region and slopes of the Great Dividing Range of North Queensland, the southern limit being in the Townsville area. However, comparatively little collecting has been done away from the few "classical" localities in North Queensland and more widespread collecting could extend its range. In an attempt to smooth out the patchiness of the distribution the known localities have been drawn on a 30 minute grid map (Fig. 1.).

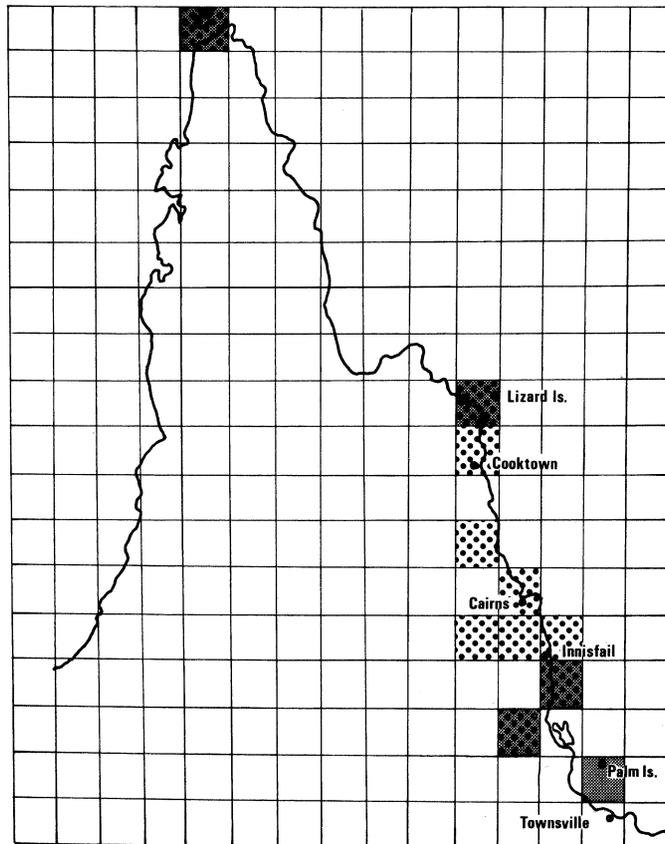


Fig. 1. Map of North Queensland showing the distribution of *Strangesta franklandiensis* (large dots) and *Saladelos hobsoni* (grey stipling) on a 30 minute map grid.

A detailed distribution of the species on Lizard Island will be given elsewhere. It was found in the dry woodland areas only occasionally being found in the broadleaf rainforest patches. The collecting sites where this species was found on the Lizard Island and adjacent islands survey are numbers 4, 5, 7, 8, 12, 13, 16, 18, 19, 25, 27, 28.

ECOLOGICAL NOTES: As stated above, the species was originally found "about the roots of trees". Before the wet season started on Lizard Island, live specimens were found buried 10-40 mm in the soil under roots and stones in sheltered places in the dry scrub areas of the island. Only occasional specimens were found in the broadleaf rainforest patches in the steep gullies on the island and these specimens were only found close to the edges of these patches.

When the wet season broke on the island, at night during or after rain, the snail was found crawling on the ground surface. It was found associated with the large camaenid, *Hadra semicastanea*, which probably forms the principal food of *Strangesta franklandiensis*, as once the wet season had commenced the *Strangesta* were observed feeding on the *Hadra* many times at night. The populations of *Hadra* appeared to outnumber by many times the populations of *Strangesta* in any given area.

Feeding took place with the *Strangesta* inserting its long head inside the aperture of the camaenid. On separating the snails it was evident that the body wall of the camaenid had been severely ruptured as large portions of viscera were seen exposed in the aperture of the shell. Limited feeding experiments were attempted in the laboratory to obtain more precise observations but the snails did not feed. On one occasion a small specimen of *Strangesta* was observed feeding on a specimen of *Saladelos hobsoni* (J. B. Burch — pers. comm).

REMARKS: *Strangesta franklandiensis* is characterized by its large glossy shell with flat spire, and with the typical transverse sculpture of many members of the genus replaced by fine spiral lines. It is placed in the genus *Strangesta* because of the close similarities with other large rhytidids in Queensland in shell and radula structure. It is separated from all other *Strangesta* species by its flat glossy yellow to greeny-yellow shell without fine transverse sculpture. *H. (R.) beddomei*, *H. (R.) jamesi* and *M. froggatti* are here considered synonyms as they all fall within the species limits of this species. *H. beddomei* from Albany Island off Cape York, *H. jamesi* from Palm Island and *M. froggatti* from Cairns represent local variations in shell shape and colour pattern within the species.

Genus **Saladelos** Iredale, 1933.

Saladelos Iredale, 1933: 48. Type species: *Saladelos commixta* Iredale 1933 (= *hobsoni* Brazier 1876).

Shell small, thin, with whorls rapidly increasing in size, spire flat, sutures impressed, umbilicus wide, body whorl rounded, aperture ovate. Sculpture of fine, simple, transverse striae to smooth on dorsal surface, ventral surface smooth. Colour uniform yellow to dark honey to greeny-yellow, no colour pattern. Radula of long, pointed peg-like teeth, rhachidian and centrals small, large laterals grading to the centrals and to small outside teeth, 30 to 50 teeth per row. Reproductive system simple, penis with small papillae.

The diagnostic characters which separate the genus *Saladelos* from all other rhytidid genera are the small flat yellow to honey shell without colour pattern and with a wide open umbilicus and weak transverse striae, and the radula structure of peg-like teeth.

Iredale (1933) erected the genus *Saladelos* to accommodate the small, flat yellow rhytidids which inhabit the broadleaf rainforest litter in the coastal region of Queensland and northern New South Wales. He recognised that the earliest specific name referable to this group, *Helix splendidula*, Pfeiffer 1846 was preoccupied by a Gmelin (1791) name and therefore erected a new name, *Saladelos commixta* Iredale 1933 for this species. This species was also created type species of the new genus. Unfortunately this is not now the earliest valid name for the suite of "Iredalean species" in North Queensland here considered to be one species. By synonymy, the type species must revert to the earliest name, *Helix (Rhytida) hobsoni* Brazier, 1876, the reasons for which are set out below.

Solem (1959) considered *Saladelos* to be a subgenus of *Delos* Hutton 1904 on gross similarities of sculpture and whorl increment and because, until fuller information was available, he considered such grouping to be in the interest of better broad understanding of the fauna. The contrary view is taken here that such amalgamation is too extreme a step on comparatively little evidence as it could obscure true relationships by channelling thought and is especially prone to possible mis-association by including convergent groups into a single higher taxon grouping. The status of the genus *Saladelos* and its relationship to *Delos* and the other groups associated with it by Solem will be published elsewhere. *Saladelos* is separated from these other groups by the sculpture of fine transverse striae and by the uniform colour of the shell with no colour pattern. The radula is composed of short, pointed, peg-shaped teeth with about half the teeth per row being large, wide teeth. Various anatomical and ecological factors, described below, give rise to doubts as to whether species of *Saladelos* still adhere to the primary carnivorous habit of the family. However, its position in the family Rhytididae is assured by its agnathous condition, the long, lanceolate unicuspid teeth and simple reproductive system with papillate penis.

Saladelos hobsoni Brazier, 1876.

Figs. 2, 4a, b, c, and 6a, b.

Helix splendidula Pfeiffer 1846: 128. Not *H. splendidula* Gmelin, 1791: 3655

Helix (Rhytida) hobsoni Brazier 1876: 99

Saladelos commixta Iredale 1933: 48 nom. nov. for *H. splendidula* Pfr.

Saladelos commixta lacertina Iredale 1933: 48

Saladelos commixta bensa Iredale 1933: 48

Saladelos hobsoni Iredale 1938: 117

DIAGNOSIS: Shell small with rapidly increasing whorls, impressed sutures and rounded shell margin, spire flat to slightly elevated, umbilicus wide and deep, whorls

open, aperture ovate-lunate. Sculpture of very fine transverse striae, occasionally with suggestion of spiral lines, ventral surface smooth. Colour usual uniform with no pattern or occasional thin darker transverse bands, yellow to honey yellow. Radula of long peg-like teeth, small central teeth, increasing in size from the centre with teeth 9-14 each side twice as large as inner laterals, few vestigial teeth towards margin, (16-18)—1—(16-18) teeth per row. Penis uniformly covered with widely spaced small papillae.

DESCRIPTION: The shell is small, 4½ whorls, with rapidly increasing whorls, impressed sutures and a rounded shell margin. The spire is flat or slightly raised and the umbilicus is wide, deep and open. The aperture is large and ovate-lunate. Sculpture consists of very fine transverse striae with the occasional suggestion of fine spiral lines. The ventral surface is smooth and glossy except for growth lines. The colour is a uniform yellow to honey with no pattern or only occasional dark yellow to green fine transverse bands.

When crawling the animal appears small with the head only protruding about a third of a shell diameter in front of the shell. The tentacles are short and the shell is carried at an angle to the ground or vertical. The importance of this shell carriage position is explained below. No ventral sensory appendages were noticed below the lower pair of tentacles and skin tuberculation is very light and sparse. The body colour is cream to light brown with darker bands of colour showing through the body wall in the position of the optic tentacle retractor muscles. A wide light mid dorsal stripe is seen in some individuals with a few showing two fine light mid dorsal stripes with a dark brown line between them.

The radula consists of a series of long peg-like teeth with a radula formula of (16-18)—1—(16-18) teeth per row (Fig. 6a, b.). The central tooth is small to vestigial. From the centre the teeth increase slowly in size until the 9th, which is about twice the size of the inner teeth. Teeth 9 to 14 are approximately equal in size. From 14 there is a sharp reduction in size to small to vestigial outer laterals. No articulation could be seen between the base plates of adjacent rows.

The buccal mass is small, only occupying the anterior part of the head cavity and is elongate-ovate in shape, not a long cylindrical muscular organ. The central nerve ring surrounds the posterior part of the buccal mass and the oesophagus arises from the dorso-posterior side.

The genital aperture is situated on the right side of the body and is displaced posteriad close to the pneumopore. In a relaxed specimen, where the penis has everted, the penis is long and sparsely covered with small papillae. There is also a large penis sheath expansion. Specimens were found at the commencement of the wet season (December) with well developed reproductive tracts. The reproductive system is simple with no flagellum or extra penial or genital appendages or verge (Fig. 2.). A large epiphallus, equal in size to the penis occurs between the penis and the vas deferens. The prostate gland consists of a series of densely convoluted tubules forming a compact gland at the proximal end of the common duct with an elongated process distally almost to the junction with the albumen gland. The spermatheca is a small simple sac with a long duct the entire length of the common duct. The spermatheca occurs close to the junction of the common duct and albumen gland. The albumen gland is small and dark yellow in colour. The hermaphrodite gland occurs in the top whorls embedded in the digestive gland. It has a similar form to that found in *Strangesta* being made up of several finger-like lobes projecting from a branching duct.

TYPE MATERIAL: Lectotype of *H. (R.) hobsoni* here designated in Australian Museum, AM C87294 from Palm Island, N. Queensland. Dimensions: max. dia. 9.6 mm; min. dia. 7.7 mm; height 5.05 mm. One paralectotype, AM C106020. Dimensions: max. dia. 8.3 mm; min. dia. 6.19 mm; height 4.5 mm.

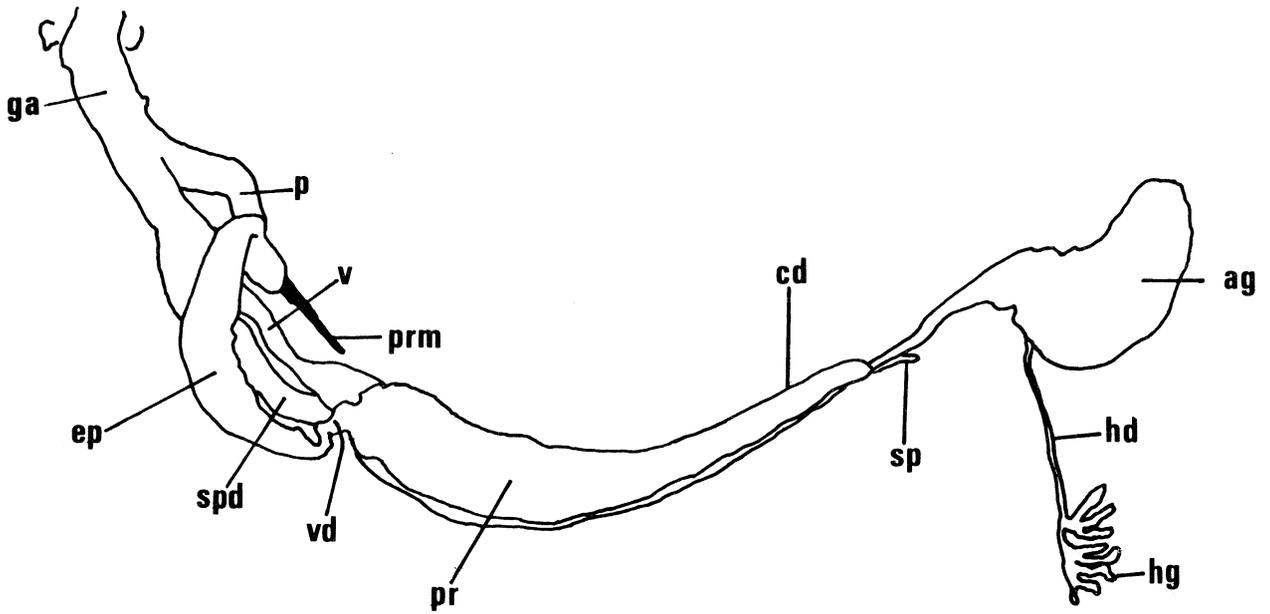


Fig. 2. Diagram of the reproductive tract of *Saladelos hobsoni*. Abbreviations: ag—albumen gland; cd—common duct; ep—epiphallus; ga—genital atrium; hd—hermaphrodite duct; hg—hermaphrodite gland; p—penis; pr—prostate gland; prm—penial retractor muscle; sp—spermatheca; spd—spermathecal duct; v—vagina; vd—vas deferens.

The original description of the species (Brazier, 1876) states that ten specimens were found when the type series was collected. The whereabouts of the other eight specimens (paralectotypes) is not known.

Because *S. commixta* was a new name for *H. splendidula* Pfr. 1846, the type specimen involved is that of the latter name. The type of *H. splendidula* is thought to have been lodged in the British Museum (Natural History) but no types were found on a recent search. Their collections do contain specimens bearing that name from the Cuming Collection from Cape York with the collector named as MacGillivray. This differs from the original description from "Eastern Australia, near Torres Strait (Lieut. Ince, R.N.)." Until more information regarding the types can be brought to light they should be considered lost.

S. commixta lacertina Iredale — 5 syntypes, AM C87300

S. commixta bensa Iredale — 5 syntypes, AM C87299

TYPE LOCALITY: Palm Island, North Queensland.

DISTRIBUTION: The species is confined to the coastal region and off-shore islands of North Queensland from a southern limit of its type locality on Palm Island between Townsville and Tully to islands off Cape York on Torres Strait. However, it is only known from a very few localities (under 10) and the distribution is shown (Fig. 1.) on a 30 minute grid map in an attempt to even out the collection bias.

A detailed distribution of the species on Lizard Island will be given elsewhere. It was found confined to the patches of broadleaf rainforest found in the gullies on the island. The collecting sites where this species was found on the Lizard Island and adjacent islands survey are numbers 1, 6, 7, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 27, 28.

ECOLOGICAL NOTES: On Lizard Island the species is confined to the leaf litter of the broadleaf rainforest patches and is found in association with *Theskelomensor lizardensis* (Pfeiffer, 1863) an aberrant helicarionid (Solem 1958), the helicinid *Helicina gouldiana*, two species of pupinid and a species of microcystid. However, in many individual collections *S. hobsoni* was one of the most abundant snail species found, in some collections making up 50% of all snails collected. This finding is in conflict with the general premise that carnivores are usually greatly outnumbered by their prey in any population assemblage. This in turn throws grave doubt on the assumption that *S. hobsoni* (in common with most other Australian rhytidids) feeds mainly on other species of snails and even brings into question whether *S. hobsoni*, and by inference the other species of the genus *Saladelos*, are carnivorous in habit or whether they have secondarily reverted to vegetable food. This hypothesis is further supported by the relative size of the buccal mass and head region, by the mode of carriage of the shell and by initial field and laboratory observations.

The shells of this species are carried in the near vertical position with the spire on the right side. The animal is small compared to the shell size and when crawling only protrudes from the shell about a third to a half of the shell diameter. The buccal mass is also small, occupying only the anterior third of the expanded head region. This is in sharp contrast to the body and buccal mass sizes of most other Australian rhytidids. These differences support the hypothesis that this species does not require a large muscular buccal mass or long head to follow prey into shell apertures or down burrows or crevices and does not ingest large prey which might be taking avoiding action. Though specimens were observed in the field in conditions where feeding could have been expected to occur (wet days when *Strangesta franklandiensis* close by was observed feeding) no feeding by this species was observed. Individuals of this species were confined with other snail species from the same locality and no feeding or evidence of feeding was observed.

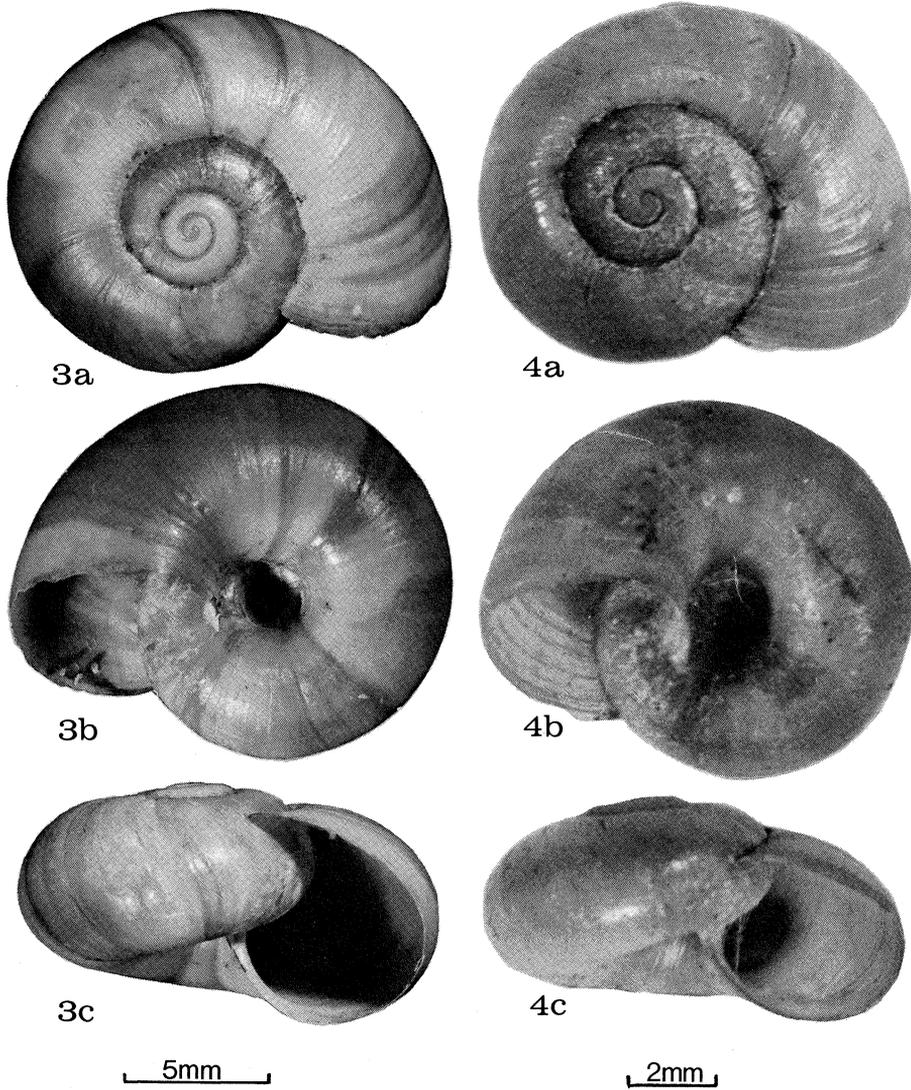


Fig. 3. Photographs of the (a) dorsal, (b) ventral and (c) aperture views of the lectotype of *Strangesta franklandiensis*, BM(NH), 1859.3.11.4.

Fig. 4. Photographs of the (a) dorsal, (b) ventral and (c) aperture views of the lectotype of *Saladelos hobsoni*, AM, C87294.

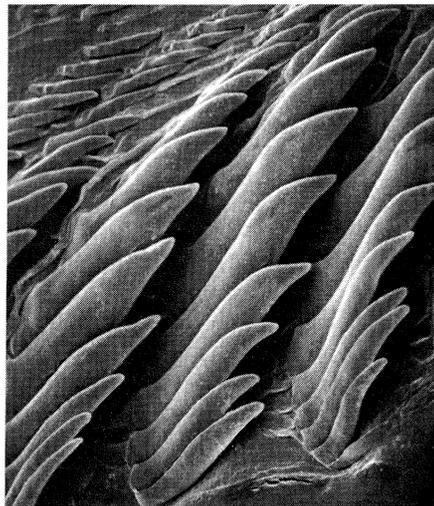
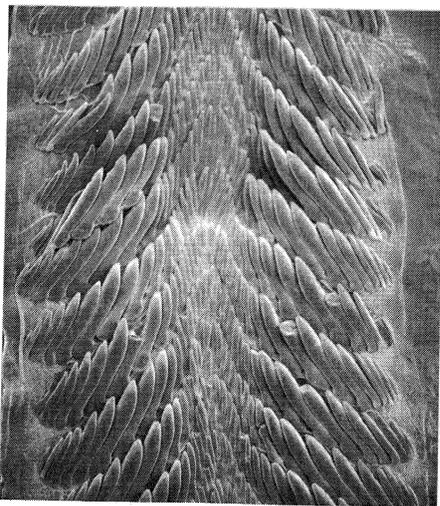
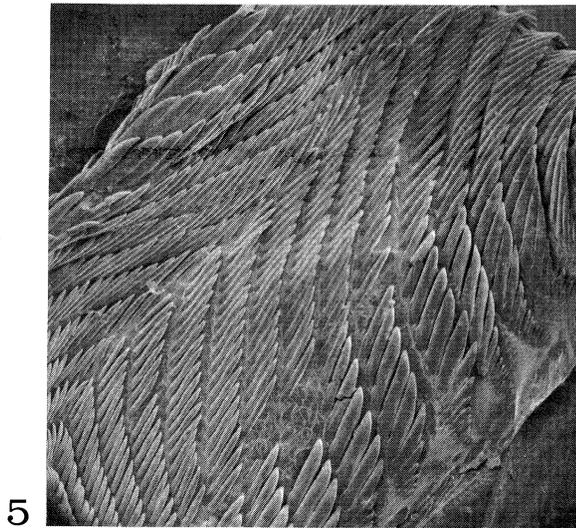


Fig. 5. Scanning Electron Microscope photograph of the radula of *Strangesta franklandiensis* — X30.

Fig. 6. Scanning Electron Microscope photographs of the radula of *Saladelos hobsoni*, (a) showing general structure — X136; (b) showing detail of tooth structure — X420.

During field work the habitat of this species was examined for other possible prey animals which might occur in sufficient numbers in these localities to support the populations of *S. hobsoni* found. No such aggregations of any likely prey species were found. However, the habitat consisted of rotting leaf litter and decaying branches in which occurred large slime mould complexes. No evidence of any food preference was found but it is felt possibly that *Saladelos hobsoni* on Lizard Island may not be carnivorous but may be secondarily herbivorous in habit.

REMARKS: *Saladelos hobsoni* is characterised by its small, flat, light to dark yellow, unicoloured shell with fine transverse sculpture, rounded lateral margin and wide umbilicus. Its small animal and vertical mode of shell carriage easily separate it from other North Queensland rhytidids. *S. commixta commixta* from the islands of Torres Strait, *S. commixta lacertina* from Lizard Island and *S. commixta bensa* from Ben Lomond, Port Denison are all here considered synonyms of this species as they only differ marginally in shell colour and in umbilicus size. Examination of the types of these species shows them to fall within the species limits of *Saladelos hobsoni*.

DISCUSSION

The visit to Lizard Island provided an opportunity to look at two dissimilar species of the same family, the Rhytididae, inhabiting a comparatively small island several kilometres off the coast. Most museum collections would simply record the locality as Lizard Island and it is only in the past few years that brief habitat data have also been routinely recorded with such material. This study emphasises the need for habitat details to be recorded in order to make maximum use of the material.

The two rhytidid species found on Lizard Island, *Strangesta franklandiensis* and *Saladelos hobsoni*, occupy different ecological niches with very little overlap in habitat requirements. Both species occur along the coastal strip and off-shore islands of North Queensland, though their exact distribution range is not known through lack of extensive collecting. There appears to be a parallel series of large and small rhytidids occurring down the coast of eastern Australia of which the two species in this present study form the northernmost representatives.

Strangesta franklandiensis appears to be an important predator of the large camaenid *Hadra semicastanea* which in turn is probably the main food-source for the rhytidid. These two snails are found over much of the island, but do not appear to penetrate far into the broadleaf vine-forest patches. *Saladelos hobsoni* is confined to this latter habitat where it is often found in large numbers. It is not known what food preference this snail possesses but it is thought probable that it may be secondarily herbivorous or fungivorous rather than carnivorous as most of the family appears to be.

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THE LIZARD ISLAND MALACOLOGICAL WORKSHOP

A Molluscan Workshop, with nine malacologists participating, was held on Lizard Island, Queensland during 1 to 12 of December, 1975.

The aim of the Workshop was to get together a small number of malacologists at the Lizard Island Research Station on the Great Barrier Reef. Each scientist undertook one or two projects, the results of which are to be published in a collected series of papers. This issue of the 'Records' contains the first of these papers.

The scientists in attendance were:

Dr J. B. Burch (then of The Australian Museum, now at the University of Michigan);

Mr R. Burn (Research Associate of the Australian Museum and Associate of the National Museum of Victoria);

Dr B. Morton (University of Hong Kong);

Dr W. F. Ponder (The Australian Museum);

Dr C. F. E. Roper (Museum of Natural History, Washington, D.C.);

Mrs S. M. Slack-Smith (Western Australian Museum);

Dr J. B. Smith (National Museum of Victoria);

Dr B. R. Wilson (Western Australian Museum);

Sir C. M. Yonge (University of Edinburgh);

The projects included a survey of the non-marine Mollusca (Burch and Smith), studies on opisthobranchs (Burn), bivalve functional morphology (Wilson, Slack-Smith, Morton and Yonge), cephalopods (Roper) and gastropod reproductive morphology (Ponder).

Lizard Island (Figure 1) is a continental island in the northern end of Australia's Great Barrier Reef (lat. 14°40'S, long. 145°28' E). It is predominantly composed of granite, is about 2 square miles in area and at its highest point is about 360 m. It lies 30 km off the coast and is 17 km from the outer barrier reefs.

The Research Station on Lizard Island is operated by the Australian Museum. The participants of the Workshop acknowledge the support given them by the then Director, Mr S. Domm.

Mr P. H. Colman, Mr I. Loch, Ms B. Duckworth, Mr E. K. Yoo and Mrs M. Burch are also gratefully acknowledged for their able assistance with running and organizing the workshop.

One paper resulting from the workshop has been published elsewhere:

Morton, B., 1978. The diurnal rhythm and the processes of feeding and digestion in *Tridacna crocea* (Bivalvia: Tridacnidae). *J. Zool., Lond.*, 185: 371-387.

W. F. PONDER

