

The Strandloper

BULLETIN OF THE CONCHOLOGICAL SOCIETY OF SOUTHERN AFRICA



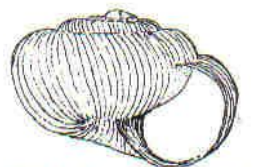
Strandloper 255

September 1998

Page 1

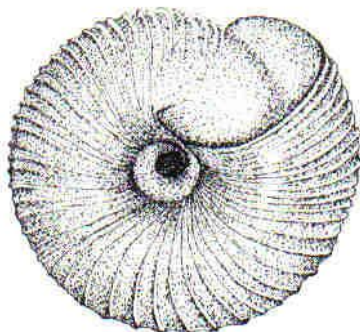
Trachycystis

Tiny inhabitants of the forest floor



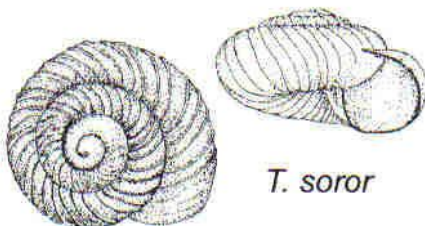
T. ordinaria (HEvH)

by the late D. Aiken



T. ordinaria

Hennops R., Gauteng
D= 3.0 mm (HEvH)



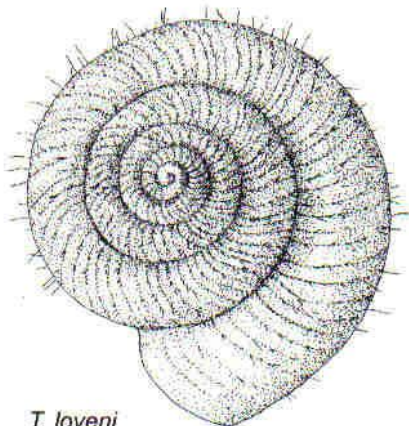
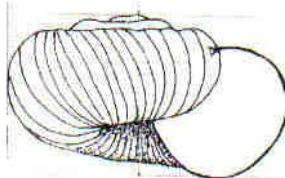
T. soror

Berario, Johannesburg, 1974
D= 1.85 mm

Preface

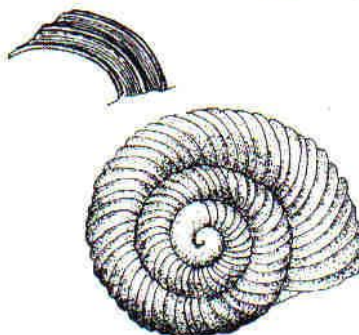
The late Don Aiken dedicated much of his spare time to a study of South Africa's terrestrial molluscs, with a view to bringing out a book on the subject. Unfortunately he passed away before the task could be completed.

In this issue we present Don's notes on the genus *Trachycystis*, part of the large pulmonate family Charopidae. Examples may often be found in the leaf litter and humus of forested or bushy areas. It is probable that some of the species mentioned here are synonyms, however I believe that Don's comprehensive treatment is worth offering 'as is'. Readers should note that a significant work on the snails of KwaZulu-Natal is in the course of being prepared by Drs Kilburn and Herbert of the Natal Museum. This work, and that of other recent investigators, will certainly contain new insights to that presented here. - Ed.



T. loveni

St Lucia, Zululand
D= 9.9 mm



T. cf. rivularis

Loskop Dam, Mpumalanga

Genus : *Trachycystis* Pilsbury

Small to very small shells, apical sculpture diverse, post-apical whorls with radial and or spiral sculpture. Most sculpture features composed of periostracal elements. Connolly (1939) dealt with this genus in some depth and separated the species in groups based on the anatomical work done by Watson in 1934. However these subgenera and groups do not lend themselves to easy identification conchologically. The reader will find it easier to identify shells on their conchological features as the dissection of these sometimes minute molluscs may not be practical. Therefore it has been decided, in consultation with Dr H.E. van Hoepen, who has carried out sterling work on a new key to the many species, to list Connolly's/ Watson's anatomical groups and then present the new key. It is hoped that the reader will find the latter less laborious than working one-by-one through the many species as listed by Connolly.

Grouped according to Watson in Connolly, 1939.

Genus *Trachycystis* Pilsbury, 1893.

Subgenus *Trachycystis* Pilsbury, 1893.

i. Group of *bisculpta* including *tollini*, *rubra*, *proxima* and *jucunda*.

Subgenus *Cyclocystis* Watson, 1934.

ii. Group of *charybdis*, including *vorticialis*

Subgenus *Chalcocystis* Watson, 1934.

iii. Group of *burnupi* including *aenea* and *viridula*.

Subgenus *Phaulocystis* Watson, 1934.

iv. Group of *simplex* including *spisicosta*, *lignicola*, *euplera*, *oreina*, *turmalis*, *epitrema*, *aulocophora*, *sericea*, *connollyi*, *farquhari*, *planissima*, *petrobia* and *metallakter*.

v. Group of *sabulorum*, including *rariplcata* and *gemmascabra*.

vi. Group of *laticostata* including *rudicostata*, *liricostata*, *rutilans* and *soror*.

vii. Group of *ordinaria* including *somersetensis*, *rivularis*, *densestriata* and *persimilis*.

viii. Group of *bathycoele* including *fossula*, *patera*, *bofoveata*, *contabulata* and *felina*.

Subgenus *Psichion* Gude, 1911

ix. Group of *inclara* including *shilwaneensis*, *junodi*, *microstriata*, *ambigua* and *ectima*.

x. Group of *teretiuscula* including *glanvilliana*, *glebaria*, *plebeia*, *falconi*, *subpinguis*, *mediocris* and *lunaris*.

xi. Group of *minutiae* including *mcbeani*, *kincaidi*, *mcdowellii*, *venatorum*, *ferarum*, *vengoensis*, *spissisculpta*, *pura* and *microscopica*.

Subgenus *Lyrocystis* Watson, 1934

xii. Group of *perplicata* including *cosmia*, *prionacis* and *erythrae*.

Subgenus *Xerocystis* Watson, 1934

xiii. Group of *capensis* including *uitenhagensis* and *chondrocycloides*.

Subgenus *Phortion* Preston, 1910

xiv. Group of *menkeana* including *hartvigiana*, *cancellata*, *lightfootiana*, *barnardi*, *gilliana* and *oconnori*.

xv. Group of *delicatula*

Subgenus *Chilocystis* Watson, 1934

xvi (a) Group of *lygaea* including *aprica*, *conica*, *africae* and *permeata*.

xvi (b) Group of *loveni* including *calorama*, *actinotricha*, *tricostroma*, *conisalea*, *pyncotricha*, *centrifuga*, *knysnaensis*, *alcocki*, *cressyi*, *clifdeni* and *watsoni*.

xvi (c) Group of *scolopendra*

xvii. Group of *placenta* including *haygarthi*.

Trachycystis species arranged according to a table devised by H.E. van Hoepen.

The umbilicus is the first feature to observe, i.e. whether it is 'A' wide, 'B' open but only medium in diameter or 'C' narrow and/or rimate or closed completely. Then within these groups, the size is assessed in terms of the major diameter and altitude in millimetres and the figures given are in that order.

Finally the sculpture in each group is given as, (i) radial sculpture only, (ii) radial sculpture at intervals with finer interstitial radial sculpture, (iii) radial sculpture with interstitial radial sculpture plus spiral sculpture of one form or another, and, (iv) regular radial sculpture plus spiral sculpture. Addi-

tional features such as bristles and flanges will be mentioned where applicable.

GROUP 'A'

Shells with a wide umbilicus in relation to the major diameter, i.e. 25 to 50% of the diameter

Group A (i) with regular radial sculpture only.

Trachycystis patera

Melville and Ponsonby, 1903.

Yellow-brown in colour. Spire flat with six whorls, first two smooth, remainder with close, regular, curved, slightly oblique, radial striae. Umbilicus very wide, exposing all the whorls. Size : 2.7 x 1.1 mm. Distribution: Western Cape (Bedford, Caledon, Simons-town)

Trachycystis contabulata

Connolly, 1932

Pale corneous brown. Spire flat and there are five whorls slightly shouldered at the suture. First whorl sculptured with faint microscopic, radial striolae, remainder with fine, close, strong, radial costulae. Umbilicus wide, exposing all the whorls. Size : 2.4 x 1.3 mm. Distribution: KwaZulu-Natal (Pietermaritzburg district)

Trachycystis felina

Connolly, 1932

A corneous brown shell with a flat spire. There are five whorls, first one and a half smooth and glossy, remainder with fine, close, radial striae, suture canaliculate. Umbilicus wide and deep. Size : 3.6 x 2.2 mm. Distribution: Eastern Cape (Katberg)

Trachycystis mcbeani

Connolly, 1932

Corneous, red-brown in colour. The spire is not very elevated and there are five whorls, first two smooth, remainder sculptured with close, regular, straight, microscopic transverse striae; suture subcanaliculate. Umbilicus wide and deep. Size : 2.2 x 1.3 mm. Distribution: North-eastern part of country from Pretoria to KwaZulu-Natal (Majuba, Weenen, Richmond, Jameson's Drift, Sodwana) to Port St Johns in the Eastern Cape.

Trachycystis chondrocycloides

Connolly, 1925

A fair sized shell for this group, corneous brown in colour. The spire is moderately elevated and there are four or five whorls, first one and a half smooth, remainder covered with close, regular, rather coarse radial striae, suture deep. Umbilicus wide and deep. Size : 6.2 x 4.0 mm. Distribution : Northern Cape (Port Nolloth and the Richtersveld)

Group A (ii) radial sculpture at intervals with finer interstitial radial sculpture.

Trachycystis eupleura

Connolly, 1925

A pale corneous brown shell with four or five whorls. The first whorl is smooth, remainder with strong, curved, oblique costulae, the intervals between filled from six to eight microscopic striolae. Umbilicus wide and open. Size : 4.8 x 2.2 mm. Distribution: Drier parts of Eastern and Western Cape including Herschel (near Aliwal North), Majuba Nek, Great Namaqualand and Danger Point, Strandfontein.

Trachycystis planissima

Connolly, 1925

A corneous brown shell with four whorls. The first one and a half smooth, remainder with strong, close, oblique costulae, the intervals between filled with two to four microscopic striolae. Size : 3.0 x 1.5 mm. Distribution : Northern Cape (Carnarvon), Eastern Cape (Swartberg Pass near Oudtshoorn) Western Cape (Gansbaai) and KwaZulu-Natal (Umkomaas).

Trachycystis sabulatorum

(Benson, 1851)

A pale corneous brown shell with five whorls. The apex is microscopically malleate and the remaining whorls are sculptured with strong, curved, oblique, radial costae, almost developing flanges at the periphery, the interstices crowded with fine striae. Umbilicus wide and open. Size : 4.3 x 2.5 mm. (Figure, p.14) Distribution : Western Cape (Hermanus, Cape Agulhas, Cape Peninsula)

Trachycystis gemmascabra

Connolly, 1939

Although found so far only in Namibia, this species is included for interest. A pale corneous brown shell with four whorls. The first one or two whorls are smooth and glossy, remainder with curved, oblique costae, the intervals between filled with fine microscopic striolae. Umbilicus wide and open. Size : 2.5 x 1.3 mm. (Figure, p.16) Distribution : Namibia (Ais-Ais)

Trachycystis bifoveata

Connolly, 1932

Another pale corneous brown shell with five whorls. The first is glossy and showing only microscopic striolae, remainder with strong, fine costae curved forward to the periphery and then receding, the interstices filled with fine striolae, from four to six between the costae; suture deeply impressed. Umbilicus wide, exposing all the whorls. Size : 3.0 x 1.3 mm. Distribution : KwaZulu-Natal (Game Pass, Umkomaas, Ingeli Bush near Kokstad) and northern part of Eastern Cape (Dwesa, Coffee Bay).

Trachycystis kincaidi

Connolly, 1932

A golden brown shell with a practically flat spire. There are four whorls, first one or two smooth, remainder with close, regular, oblique microscopic transverse costulae, gradually increasing in strength and distance apart, with almost imperceptible striolae between them; suture deeply impressed. Umbilicus wide and open. Size : 2.4 x 1.2 mm. Distribution : Eastern Cape (Grahamstown, East London) and KwaZulu-Natal (Pomeroy, Jamesons Drift)

Group A (iii) radial sculpture at intervals with finer interstitial radial sculpture and spiral sculpture of some form.

Trachycystis laticostata

Melville and Ponsonby, 1903

A transparent yellow-brown shell with a depressed conic spire and mammillate apex. Whorls four to five, first one and a half with close microscopic spiral lines, remainder bearing strong, curved, oblique laminae devel-

oping into flanges at the periphery, the intervals with three or four close striolae crossed by close, microscopic spiral lines. Umbilicus wide and open. Size : 4.2 x 2.1 mm. Distribution : Eastern Cape, KwaZulu-Natal (Port Edward, Ingeli Bush near Kokstad, Jamesons Drift), Mpumalanga (Waterval Onder) Northern Province (Magoebaskloof)

Trachycystis rudicostata

Connolly, 1922

A transparent yellow-brown shell with an exerted spire. There are four whorls, first one and a half with microscopic spiral striolae, remainder with prominent, curved, oblique lirae, increasing regularly and developing into strong flanges at the periphery for more than half their length, the intervals with fine, close radial striolae and no other spiral sculpture; suture deeply impressed. Umbilicus wide and deep. Size : 1.8 x 0.9 mm. Distribution : Widespread over inland KwaZulu-Natal, Northern Province (Magoebaskloof)

Trachycystis rutilans

Melville and Ponsonby, 1908

Similar to the previous species except that the radial costae do not develop into flanges at the periphery and there is no spiral sculpture on the protoconch, but it occurs where it cuts the interstitial striolae on the later whorls. Umbilicus wide and deep. Size : 2.3 x 1.2 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Pomeroy), Mpumalanga (Sabie).

Trachycystis soror

Connolly, 1922

This minute species is similar to the last in that there is no spiral apical sculpture and the spiral sculpture cuts the interstitial radial striolae on the later whorls. However, the radial sculpture on the early whorls develops into strong lamellae of which there are about twenty on the last whorl. Umbilicus wide and exposing all the whorls as in the rest of the group. Size : 1.5 x 1.2 mm. (Figures, p.1 & p.15) Distribution : Originally described from Mt Vengo in Mozambique but material matching the description has since turned up at Krugersdorp in Gauteng.

Trachycystis ordinaria

Melville and Ponsonby, 1908

A reddish corneous brown shell, spire moderately exerted. Whorls five, first one and a half smooth, remainder covered with faint striolae in the intervals and traces of close, faint spiral lines; suture simple. Umbilicus wide and deep. Size : 3.8 x 2.2 mm. (Figure, p.1) Distribution : Extensively over Free State (Bloemfontein, Kroonstad), old Transvaal province (Potchefstroom, Hennops River, Sabie, Wyliespoort, Magoebaskloof, Abel Erasmus Pass, Thabazimbi) and northern KwaZulu-Natal (Jozini).

Trachycystis somersetensis

(Melville and Ponsonby, 1893)

Known only from the unique type pair which are bleached and weatherworn shells. They resemble *T. ordinaria* except that the costulae are perhaps weaker and more distant. Size : 2.8 x 1.8 mm. Distribution : Eastern Cape (Somerset East)

Trachycystis spissisculpta

Connolly, 1932

A pale corneous brown shell, spire slightly exerted. Whorls four to five, first one and a half to two smooth, remainder covered with weak, curved, oblique microscopic striae, probably representing growth lines, the intervals between filled with extremely fine striolae, the whole crossed by equally fine, regular microspiral grooves; su-

ture impressed. Umbilicus wide and open. Size : 1.8 x 1.0 mm. Distribution : KwaZulu-Natal (Van Reenen), Mpumalanga (Schoemanskloof, and north of Middelburg)

Group A (iv) regular radial sculpture plus spiral sculpture*Trachycystis vorticialis*

(Benson, 1850)

A reddish corneous shell, depressed orbicular in general shape with a flat spire. Whorls four and half, apical smooth, remainder covered with close, nearly straight, regular radial lirae, there is a clear microspiral lineation on the second whorl, but not discernable elsewhere on the weathered shells available to Connolly. Umbilicus wide. Size : 5.3 x 2.8 mm. Distribution : Cape Peninsula to P. Elizabeth.

Trachycystis liricostata

(Melville and Ponsonby, 1891)

A transparent corneous brown shell with four whorls, first one and a half smooth, remainder sculptured with slightly curved, oblique, somewhat distant radial costae, the intervals filled with close, regular, slightly undulating spiral grooves, suture simple but canaliculate. Umbilicus wide and deep. Size : 2.8 x 2.5 mm. Distribution : Eastern Cape (Van Stadens Pass, Mpandi (former Transkei)), KwaZulu-Natal (Jamesons Drift), Mpumalanga (Schoemanskloof)

Trachycystis pura

Connolly, 1922

A milky translucent shell with three and a half whorls covered, from apex to base, with close, strong, regular, nearly straight radial striae, protoconch and umbilicus showing microspiral striae. The spire is nearly flat and the suture narrow but well defined. Umbilicus wide and deep. Size : 1.3 x 0.7 mm. (Figure, p.15) Distribution : Originally found on Mt Vengo in Mozambique but subsequently also in Mpumalanga (Strydom Tunnel & Louis Trichardt) and KwaZulu-Natal (Jamesons Drift)

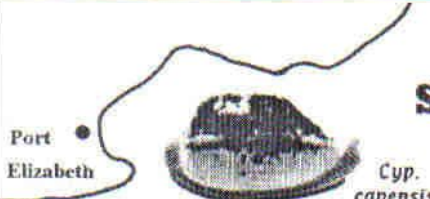
GROUP B

Shells with medium sized umbilicus, 10 - 25% of the shell diameter.

Group B (i) with regular radial sculpture only*Trachycystis glebaria*

Melville and Ponsonby, 1903

A corneous brownish yellow shell with a lightly exerted spire. There are five whorls, first one and a half smooth, remainder sculptured with close, fine, regular, straight radial striae; suture impressed. Umbilicus medium, extending to the summit and just exposing all the whorls. Size : 3.6 x 2.2 mm. Distribution : KwaZulu-Natal (Pine-town, Hilton, Krantzkop, Ingeli Bush near Kokstad, Equeefa), Northern Province (Magoebaskloof).



**ALGOA BAY
SPECIMEN SHELLS**

BRIAN HAYES

- * Largest variety of S. African shells offered at the best prices.
- * Large world-wide stock - many rarities offered !
- * We buy - sell - trade top-quality specimen shells !
- * Write for free price-list. We offer quality and reliability.
- * WE BUY : Collections and rare shells - contact us first !
- * Special offers for new collectors - please enquire !

* P.O BOX 804, PORT ELIZABETH, 6000, SOUTH AFRICA
* Tel / Fax : +27-41-334521

SUBSCRIBE NOW TO
LA CONCHIGLIA

The international shell magazine with all the latest news; 60 pages of glossy print packed with colour photos. Read scientific articles, new species' descriptions and book reviews by the world's top conchologists and malacologists. For only R270 per year, 5 issues will be sent to you by air mail. For more information, or payment of subscriptions write to: Brian Hayes, your local agent, P.O. Box 804, Port Elizabeth 6000

Trachycystis plebeia

Connolly, 1932

Similar to the previous species but it is smaller, rather more brown with a weaker sculpture and a wider umbilicus. Size : 3.3 x 1.8 mm. Distribution: KwaZulu-Natal (Bushmans River Falls, Weenen, Mfongosi, Jamesons Drift)

Trachycystis mcdowellii

Connolly, 1922

A corneous shell with four whorls, protoconch smooth and there are faint traces of microscopic radial striae, thereafter the remaining whorls are covered with close, nearly straight, microscopic radial striae; suture shallow. Umbilicus medium but extending to the summit and exposing all the whorls. Size : 1.7 x 0.8 mm. (Figure, p.15) Distribution: originally described from Mozambique (Mfonga Siding) but found by H.E. van Hoepen in KwaZulu-Natal (Jamesons Drift, Ingeli Bush) and the Eastern Cape (Mpandi, Dwesa, Coffee Bay, East London)

Group B (ii) with radial sculpture at intervals and interstitial radial sculpture

Trachycystis bathycoele

(Melvill and Ponsonby, 1892)

A corneous yellow-brown shell with an almost flat spire and five or six whorls. The first two whorls are smooth, remainder covered with strong, straight, close, regular, radial costae, the intervals filled with from four to seven fine, close microscopic striolae; suture simple and deep. Umbilicus deep and almost wide enough to qualify for Group A. Size : 3.0 x 2.0 mm. Distribution: Eastern Cape (Port St Johns, Dwesa) KwaZulu-Natal (Pietermaritzburg, Ntbankulu, Winklespruit, Oribi Gorge, Jamesons Drift, Nkandla), Mpumalanga (Sabie, Stydom Tunnels, Woodbush)

Trachycystis ferarum

Connolly, 1932

A corneous yellow-brown shell with an almost flat spire. There are three and a half whorls, first one and a half smooth, remainder covered with fine, close, straight, slightly oblique, microscopic costulae, the intervals filled

with fine, close striolae, suture rather deep. Columellar margin very slightly reflexed, slightly overhanging the narrow, tubular umbilicus. Size : 1.7 x 0.8 mm. Distribution: KwaZulu-Natal (Game Pass, Van Reenen). Similar to *T. pura* (Group A (iv)) but with a much narrower umbilicus.

The next three species that could fit into this section are somewhat doubtful but are listed in case they are rediscovered.

Trachycystis petrobia

(Benson, 1851)

Connolly (1939) states that no authentic example of this shell can be traced, as the set from the Macandrew collection in the Cambridge Museum differs so widely from Benson's description that they cannot possibly represent it. The shell described by Benson measured 5.5 x 3 mm and there were four to five whorls, covered with oblique plicae, the interstices striate more widely umbilicate than *perplicata*. Benson found his specimen on the road from High Constantia to Hout Bay.

Trachycystis rariplicata

(Pfeiffer, 1849)

Said to differ from *T. sabulorum* in respect of a more exerted spire and more corneous texture; costae somewhat weaker and the umbilicus narrower, not exposing all the whorls. Connolly was not able to trace any instance of its rediscovery since first found by Benson at Green Point Light-house. Its size is 4.2 x 3.1 mm.

Trachycystis fossula

Connolly, 1925

Extremely close to *T. bathycoele* but only the type specimen exists and this was damaged during illustration. The whorls appear to increase a trifle less slowly and the costae to be a little weaker. The size was 3.3 x 2.0 mm and it was found in Mozambique on Mt Vengo at about 1700 m.

Group B (iii) radial sculpture at intervals with interstitial radial sculpture plus spiral sculpture of some form.

Trachycystis charybdis

(Benson, 1856)

A red or yellow shaded corneous brown shell with an impressed spire. There are five and a half whorls, shouldered around the suture and umbilicus, and each ascending above its predecessor, thus giving a dished shape to the spire. The first half whorl is smooth, next half to one whorl with extremely fine microspiral lines and close, straight radial costulae, which on later whorls develop into strong, straight, prominent costae, gradually becoming farther apart and then merging in the umbilicus, the interstices filled with faint microscopic radial striolae; suture impressed. Umbilicus medium and deep. Size : 8.8 x 5.0 mm. (Figure, p.13), Distribution: Western Cape (Cape Peninsula, Table Mountain, Kalk Bay, Palmiet River mountains).

Trachycystis connollyi

Melvill and Ponsonby, 1909

A very different shell from the last with an exerted, conical spire and chocolate brown in colour. There are four whorls, first one and a half smooth, remainder covered with regular, curved, oblique, weak costulae, close together at first and becoming more distant on the rest, the interstices filled with fine radial striolae and the whole cut by microspiral grooves; suture simple but well defined. Columellar margin reflexed, half obscuring the umbilicus. Size : 4.8 x 4.0 mm. Distribution: Western Cape (Montagu, Bredasdorp), Northern Cape (Kuruman)

Trachycystis metallakter

Connolly, 1912

A shell with a moderately exerted spire, colour not known to the author. It has four whorls, the first smooth, remainder sculptured with strong, slightly curved and oblique costae, which are prolonged at the periphery into short, narrow flanges, becoming closer on the body whorl, the intervals filled with faint, microscopic striolae, cut by stronger, close, regular, spiral grooves; suture impressed. Columellar margin reflexed but not overhanging the open umbilicus. Size : 4.0 x 2.2 mm. Distribution: Western Cape (Caledon).

Trachycystis rivularis

(Krauss, 1848)

A bright corneous brown shell with a slightly exerted spire and four whorls. The apical whorl is smooth, remainder covered with close, curved radial costulae with fine striolae in the intervals crossed by spiral grooves; suture impressed. Umbilicus not wide but exposing all the whorls. Size : 1.5 to 2.2 x 1.4 to 1.6 mm. (Figures, p.1 & p.15) Distribution: KwaZulu-Natal (source of Mooi River, Pomeroy), Gauteng (Germiston, Bedfordview), Mpumalanga (32 km north of Middelburg, Waterval Boven). Connolly described a variety of this mollusc as *densestriata* (Figure, p.15) but the author has been unable to separate this on the basis of Connolly's differences, i.e. "..... costulae being infinitesimally though manifestly closer together; the spire also,, being slightly more depressed." However, he does say that the difference in the spire may not prove to be a constant point of difference. This variety was recorded from the former Transvaal at Pretoria and Pietersburg.

Trachycystis persimilis

Connolly, 1932

Described by Connolly (1939) as "Possibly representing a south-eastern race of *rivularis*, ...". The size was recorded as 3.6 x 2.4 mm which is certainly larger than anything seen by the author. The habitat was given as KwaZulu-Natal (Mfongosi, Sand-spruit, Weenen). There may be an overlap of forms in *ordinaria*, *rivularis* and variety *densestriata* a point made by Connolly himself. Where the present species fits in is not clear.

Group B (iv) with regular radial sculpture plus spiral sculpture*Trachycystis perplicata*

(Benson, 1851)

A semi-transparent, corneous yellow-brown shell with occasional traces of narrow rufous rays; spire moderately exerted. There are six whorls, first one and a half with close, fine microscopic spiral lines, remainder covered with strong, curved, oblique radial costae, gradually increasing in dis-

tance apart, intervals filled with fine striolae which are cut by the continuation of the apical spiral lines; suture somewhat impressed. Umbilicus deep and not overhung by the columellar marginal reflexion. Size : 7.2 x 5.1 mm. Distribution : Western Cape (Table Mt to Cape Point), Eastern Cape (Port Elizabeth, Palmiet River mountains)

Trachycystis lightfootiana

(Melvill and Ponsonby, 1909)

A semi-transparent corneous brown shell, paler on the base, spire nearly flat. There are four and a half whorls, first smooth, remainder covered with close, regular, curved radial striae and close, regular, slightly undulating, incised spiral lines; suture simple and well-defined. Columellar margin reflexed but not obscuring the deep and open umbilicus. Size : 20.7 x 13.1 mm. Distribution : Western Cape (Swellendam, Montagu, Bredasdorp)

Trachycystis permeata

Melvill and Ponsonby, 1903

A silky, corneous, greenish-yellow brown shell with a rather depressed spire. There are five whorls, bluntly angulate at the periphery, first two with faint, microscopic spiral grooves, remainder with strong, regular, slightly curved, oblique radial costae, the intervals filled with fine striae, cut by spiral grooves, faint on the upper surface and stronger on the base; suture simple, well defined. Umbilicus deep and open. Size : 6.1 x 3.3 mm. Distribution : KwaZulu-Natal (Pine-town, Tongaat, Isipingo, Karkloof river valley, Mfongosi)

Trachycystis scolopendra

Melvill and Ponsonby, 1903

A pale, corneous brown shell, discoidal in shape, with a mamillate apex and depressed spire. There are six carinate whorls, first one and a half smooth, remainder with sharp, curved, oblique radial costae, increasing in strength and distance apart and forming prominent peripheral laminae, intervals filled with microscopic radial striolae, cut by close, strong, regular, incised spiral lines; suture well defined and crossed ir-

regularly by some of the laminae on the early whorls. Size : 13.5 x 7.2 mm. (Figure, p.14) Distribution : KwaZulu-Natal (Durban, Equeefa, Umkomaas, Umzimkulu, Port Shepstone) and Eastern Cape (Port St Johns)

Group B (iv) with regular radial sculpture plus spiral sculpture*Trachycystis turmalis*

(Morelet, 1889)

A corneous brown shell with a conical spire and five whorls, first one and a half smooth, remainder with close, curved oblique, slightly irregular radial striae, crossed by close, fine microspiral grooves; suture deep. Umbilicus moderately broad though not open. Size : 5.0 x 3.6 mm. Distribution : Eastern Cape (Dwesa, Port Elizabeth, Cradock)

Trachycystis epetrima

(Melvill and Ponsonby, 1892)

Connolly (1939) comments as follows:- "Identical with *turmalis* in all respects except that the spire may be a little lower, the suture more impressed, and the transverse sculpture a trifle sharper, possibly due to fresher condition. Size : 4.4 x 2.5 mm. Distribution : Eastern Cape (Somerset East, Port Elizabeth, Jansenville, Swartberg Pass)

Trachycystis venatorum

Connolly, 1932

A pale corneous brown shell, spire moderately exerted, apex bluntly rounded. There are four and a half somewhat shouldered whorls, first whorl smooth, next half with fine, close microspiral grooves, after which the sculpture consists of regular, curved oblique weak radial striae, cut by faint microspiral grooves; suture deeply impressed. Columellar margin barely reflexed, not overhanging the deep, funnel-shaped umbilicus. Size : 2.0 x 1.3 mm. Distribution : KwaZulu-Natal (Game Pass, Inhluzani, Belle Vue, Eastern Cape (Paterson)

Trachycystis vengoensis

Connolly, 1922

A silky, reddish corneous shell with nearly flat spire, each whorl just showing above the next. There are three

and a half whorls, protoconch microscopically, reticularly punctate, remainder covered with microscopic, close, straight, regular radial striae, crossed by faint spiral striation around the umbilicus; suture deep. Columellar margin not reflexed, umbilicus not wide, but deep, extending to the summit and exposing all the whorls. Size : 1.5 x 0.4 mm. (Figure, p.15) Distribution : described from Mt Vengo, Mozambique, but subsequently found in KwaZulu-Natal (Mapelane, Ingeli Bush, Dundee) and Mpumalanga (Schoemans Kloof).

Trachycystis cosmia
(Pfeiffer, 1850)

A transparent, corneous greenish-brown shell, spire slightly exerted. There are four and a half whorls, first one and a half with close, fine, microscopic spiral grooves, remainder covered with strong, close, regular, curved, oblique radial costulae; the spiral grooves continue faintly in the interstices between the costulae but practically disappear on the base; suture rather deep. Columellar margin scarcely reflexed over the deep umbilicus. Size : 5.9 x 3.6 mm. Distribution : Western Cape (Peninsula, Riversdale, Riebeeck Kasteel Mts.)

Trachycystis menkeana
(Pfeiffer, 1842)

A white to buff shell with from one to six brown or chestnut coloured bands, generally one prominent above the periphery and the remainder on or below the periphery but variable; spire nearly flat. There are four to five whorls, first one and half with fine, close, microscopic spiral grooves, remainder with close, regular, curved, slightly oblique radial striolae and more distant microspiral grooves; suture simple, shallow. Umbilicus fairly narrow (about 12% of the major diameter) but exposing all the whorls. The above sculpture is discernible on live collected specimens and once shells become even slightly weatherworn it is difficult to see. Size: 20 to 25 x 11 to 13 mm. (Figure, p.14) Distribution : Western Cape (Peninsula, Bredasdorp, Die Kelders)

Group C

Shells with a narrow to closed umbilicus, i.e. generally less than 10% of the major diameter.

Group C (i) radial sculpture only

Trachycystis lignicola

Melville and Ponsonby, 1898

A pale corneous brown shell with a moderately exerted spire. Whorls four and a half, first one and a half smooth, remainder covered with close, faint, regular, curved striae; suture simple. Umbilicus narrow and deep, not obscured by the narrow reflexion of the columellar margin. Size : 4 to 5 mm x 2.8 to 3.2 mm. Distribution : Eastern Cape (Cradock, Grahamstown, Van Stadens Pass, Swartberg Pass), KwaZulu-Natal (Ingeli Bush, Illovo River mouth), Northern Province (Magoebaskloof).

Trachycystis teretiuscula

Melville and Ponsonby, 1897

A pale, corneous brown shell, spire slightly raised. Whorls five, strongly shouldered at the suture, first one and a half smooth except for slight pitting, remainder covered with close, fine, nearly straight, microscopic striae; suture canaliculate. Columellar margin narrowly reflexed, slightly overhanging the very narrow umbilicus. Size : 4.0 x 3.0 mm. Distribution : KwaZulu-Natal (widespread including Royal Natal National Park), Free State (Harrismith), Eastern Cape (Van Stadens Pass, Grahamstown, East London, Maclear), Northern Province (Magoebaskloof)

Trachycystis falconii

Connolly, 1939

A pale corneous brown shell with an exerted spire. There are five and a half whorls, first smooth, remainder covered with close, straight, regular, microscopic radial striolae; suture deep. Columellar margin reflexed over the very narrow umbilicus. Size : 2.8 to 3.0 x 1.7 to 2.3 mm. (Figure, p.16) Distribution : Eastern Cape (Bushmans River Mouth, Port St Johns)

Trachycystis microscopica

(Krauss, 1848)

A truly microscopic shell and pale corneous brown in colour, somewhat angled at the periphery. There are three and a half whorls, first two smoothly micropunctate, remainder covered above with weak, close, oblique radial striolae which are finer on the the base; suture well defined. Columellar margin broadly reflexed, partly concealing the narrow umbilicus. Size : 1.3 x 1.1 mm. (Figure, p.15) Distribution : KwaZulu-Natal (Mooi River, Ingeli Bush, St Lucia area)

Group C (ii) with radial sculpture at intervals and finer interstitial radial sculpture.

Trachycystis burnupi

(Melville and Ponsonby, 1892)

A corneous yellow-brown shell with a fairly spire, there are four whorls, first one and a half micropunctate, remainder covered with strong, close, regular, slightly curved radial costae, the intervals between with about six faint, microscopic striolae; suture impressed. Upper margin of columella narrowly reflexed but not overhanging the narrow umbilicus. Size : 6 to 7 mm x 3.8 to 4.5 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Umkomaas, Oribi Gorge, False Bay, Mkuzi, Lake Sibaya), Eastern Cape (Dwesa)

Trachycystis aenea

(Krauss, 1848)

Similar to but larger than the previous species and there are anatomical differences. The shell is more dome shaped with a narrower umbilicus in relation to the greater diameter, suture shallower, aperture descends somewhat whereas in *T. burnupi* it is almost in line with the body whorl and the reflexion of the columellar margin is triangular almost obscuring the umbilicus. Size : 11.4 x 8.5 mm. Distribution : KwaZulu-Natal (Durban, Tongaat, Pietermaritzburg, Illoval, Umtentweni, and widespread north of the Tugela) and Eastern Cape (Umzamba River mouth, Port St Johns, Dwesa, Coffee Bay)

Trachycystis viridula

Connolly, 1939

The following is a quote from Connolly's description, "Spire a trifle less exerted than in *burnupi*, and consequently far less domed than in *aenea*; whorls slightly less convex, and increasing a trifle more rapidly so that their upward slope is more gentle. The perforation is a trifle less covered by the columellar margin than in *aenea* and far more so than in *burnupi*, and the colour, especially on the later whorls, of a distinct greenish hue." Size : 8.7 x 5.3 mm. (Figure, p.16) Distribution : Western Cape (Ladismith)

Trachycystis simplex

Melvill and Ponsonby, 1903

A pale corneous brown shell with a moderately exerted spire and five whorls, first smooth, second with weak and remainder with strong, curved, oblique costulae, the intervals between filled with from six to eight microscopic striolae; suture simple, well defined. Umbilicus narrow but not obscured by the reflexion of the columellar margin. Size : 7.4 x 5.4 mm. Distribution : KwaZulu-Natal (Oribi Gorge), Eastern Cape (Dwesa, Coffee Bay, Grahamstown, East London, Plettenberg Bay, Keurbooms R)

Trachycystis spissicosta

Melvill and Ponsonby, 1907

Similar to the following species with the following differences. There are just over four whorls, the costulae are slightly closer together, though more distant on the second whorl and the umbilicus is slightly wider. Size : 7.0 x 4.4 mm. Distribution : Eastern Cape (Grahamstown), Free State (Thaba N'chu)

Trachycystis aulacophora

(Ancey, 1890)

Still in the *simplex* mould but much smaller, with a conical spire and five whorls, first one and a half smooth, otherwise as in *spissicosta* except that the costulae are more distant on the early whorls and closer on succeeding whorls; suture deep. Size : 4.5 x 3.6 mm. Distribution : Eastern Cape (P. Elizabeth to Swartkops R., Grahamstown)

Group C (iii) with radial sculpture and interstitial sculpture plus spiral sculpture of some kind*Trachycystis bisculpta*

(Benson, 1851)

A corneous red or yellowish brown shell with a slightly exerted spire. There are five whorls, the first with six to eight strong microscopic spiral costulae which are crossed on the last quarter by close radial striae; after this the sculpture changes to a pattern of close, regular, curved, oblique radial costae, the intervals between filled with four or five faint striolae, intersected by microscopic spiral lines; on the base the costae merge closer together, almost obliterating the interstitial sculpture; suture simple, well defined. Umbilicus narrow and half obscured by the marginal reflexion of the columella. Size : 7 to 10 x 6 to 7 mm. Distribution : Western Cape (Peninsula and widespread through province)

Trachycystis rubra

Connolly, 1925

A corneous reddish or yellowish-brown shell with a slightly exerted spire. There are five or six whorls, first one and a half sculptured with close, regular, spiral striolae, remainder covered with close, regular straight radial costulae, strong above and weaker on the base, the intervals filled with four or five fine, microscopic striolae and the apical spiral structure is continued, but very weak and difficult to see even under a microscope; suture simple, well defined. Columellar margin narrowly reflexed, almost covering the narrow umbilicus. Size : 10.0 x 7.8 mm. (Figure, p.16) Distribution : Western Cape (Caledon, River Zonder End Mts)

Trachycystis jucunda

Connolly, 1929

Smaller and flatter than the last two species with five whorls, first one and a half with close, weaker spiral sculpture, remainder with strong, close, regular, curved, oblique radial costae, interstices filled with fine microscopic radial striolae and crossed by spiral costulae, lower than the radial costae; suture deep. Umbilicus narrow but not

covered by any marginal reflexion of the columella. Size : 5.3 x 3.8 mm. Distribution : Western Cape (Montagu, Swellendam, Bredasdorp)

Trachycystis oreina

Melvill and Ponsonby, 1903

A pale corneous shell with moderately exerted spire. There are four and a half whorls, first one and a half smooth, remainder with strong, curved, oblique, costulae, which are further apart on the second than on succeeding whorls, intervals filled with faint striolae which are crossed, at least on the last whorl, by weak microscopic spiral lines. Umbilicus narrow. Weatherworn shells may not display the microspiral sculpture on the body whorl and a collector would then be inclined to place them in Group C (ii). Size : 5.2 x 3.5 mm. Distribution : Eastern Cape (Grahamstown, Alicedale, Tzitzikama, Loerie Trail)

Trachycystis farquhari

(Melvill and Ponsonby, 1892)

Similar in some respects to *T. connollyi* but a pale olivaceous shell with a nearly flat spire and four whorls. The first one and a half whorls smooth, remainder covered with regular, curved, oblique radial costulae, the interstices filled with fine striolae which are cut by fine, close microscopic spiral lines; suture simple, well defined. The narrow umbilicus is more than half concealed by the reflexion of the columellar margin. Size : 5 to 6 x 3.5 to 5.0 mm. Distribution : Eastern Cape (Dwesa, Port Elizabeth), Western Cape (Montagu)

Trachycystis ectima

Melvill and Ponsonby, 1899

A creamy corneous shell with four and a half whorls, bluntly shouldered at the periphery, first one and a half smooth, remainder sculptured with regular, slightly curved, oblique radial costulae, intervals between filled with fine, close striolae, cut by equally fine close spiral lines, giving a minutely granulate appearance; suture simple, well defined. Columellar margin narrowly reflexed, almost concealing the narrow umbilicus. Size : 3.6 x 2.5 mm. Distribution : KwaZulu-Natal (Umko-maas, Tongaat, Winklespruit)

Trachycystis prionacis
(Benson, 1864)

A transparent, pale corneous brown shell with radial rufous flames on the upper surface and a moderately exerted spire. There are nearly five whorls, carinate at the periphery, first two with close, regular, incised microscopic spiral lines, remainder sculptured with strong, curved, slightly oblique costae, gradually becoming wider apart, strongest at the periphery and weaker on the base, the interstices filled with microscopic striolae and faint traces of the apical microscopic sculpture; suture simple, well defined. Umbilicus narrow and unobscured. Size : 4.6 x 2.6 mm. Distribution : Western Cape (Cape Point, Kommetjie, Table Mountain, Die Kelders, Bredasdorp)

Trachycystis hartvigiana
(Pfeiffer, 1861)

A transparent corneous reddish brown shell with a slightly exerted spire. There are five whorls, first one and a half smooth, the next covered with close, fine, slightly oblique radial striae which are crossed near the end of the whorl by fine, regular, distant spiral grooves; both forms of sculpture gradually becoming stronger on the succeeding whorls, while strong, radial costae develop at regularly increasing intervals, at first with about six and finally ten interstitial striolae; suture simple, well defined. Columellar margin reflexed and half obscuring the narrow umbilicus. Size : 15.7 x 11.0 mm. Distribution : Western Cape (Caledon, River Zonderend)

Trachycystis cancellata
Connolly, 1925

A large, globose, corneous red-brown shell with four whorls, the last embracing practically the whole shell. First whorl practically smooth, next half whorl with curved, transverse striae, next half whorl with nearly straight, radial costulae and on the last two whorls the costulae become fainter and progressively farther apart, with three or four fainter striae in the intervals, crossed by close, regular spiral ridges, giving the shell a silky sheen. Margin of columella narrowly reflexed, almost concealing the nar-

row rima. Size : 20 x 13 mm. Distribution : Western Cape (Knysna, Outeniqua Mts)

Trachycystis gilliana
Connolly, 1939

A large, depressed globose, semi-transparent, corneous yellow-brown shell with four whorls. First whorl smoothly malleate, remainder with close, regular, curved, oblique growth lines and close, weak striae in the intervals. There are also close, weak striae in the intervals. There are also close, weak, zig-zag spiral grooves on the base. Columellar margin reflexed but only slightly overhanging the narrow umbilicus. Apparently only a single live-taken specimen has been collected. Size : 21 x 15 mm. (Figure, p.15) Distribution : Western Cape (Dassiesberg Mts, near Robertson)

Trachycystis lygaea
(Melvill and Ponsonby, 1892)

A medium sized, depressed, transparent, corneous buff shell with six whorls, carinate at the periphery. First two whorls with microspiral lines only visible in shells in fresh condition, remainder with coarse, distant, slightly irregular, curved, oblique costulae, the interstices filled with extremely fine faint, microscopic striolae, cut by close, regular, microscopic spiral grooves which are wavy on the base. Columellar margin reflexed but not overhanging the narrow umbilicus. Size : 13 x 7 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Umhlali).

Trachycystis conica
Connolly, 1939

A small shell with a conical spire and inflated base, fragile and pale olivaceous with about four whorls, carinate at the periphery. First two whorls smooth, remaining two with strong, curved radial costulae, regularly increasing in distance apart, and the intervals filled with fine microscopic striolae. Columella margin narrowly reflexed, half obscuring the very narrow umbilicus. Size : 6.5 x 5 mm. (Figure, p.14) Distribution : KwaZulu-Natal (Durban, Krantz kop)

Trachycystis africae
(A.D. Brown, 1865)

A fairly small, depressed globose, corneous yellow-brown shell with five whorls, bluntly shouldered at the periphery. First whorl smoothly malleate, remainder with strong, curved, slightly oblique radial costulae, regularly increasing in distance apart, the intervals filled with close, fine microscopic striolae and crossed by close microspiral lines, appearing as wavy furrows on the base. Umbilicus very narrow and half concealed by the marginal columella reflexion. Size : 7.3 to 9.8 x 5.0 to 6.0 mm. (Figure, p.14) Distribution : Eastern Cape (Great Brak R.) and possibly KwaZulu-Natal (Ingeli Bush, Jamesons Drift, Mapelane). However, the shells from northerly localities could have been misidentified because *T. loveni* is similar except for the presence of bristles whereas the species under consideration does not and the bristles on *T. loveni* are often brushed off no matter how much care one takes with the specimens.

Trachycystis loveni
(Krauss, 1848)

A fair sized, depressed, fragile, pale corneous shell with bristles and a moderately exerted spire. There are six whorls, bluntly shouldered at the periphery, first whorl smooth, remainder with curved, oblique, regular, strong, rather broad costae, intervals filled with fine, faint, microscopic radial striolae, crossed by stronger, close, regular, microscopic, slightly undulating, spiral lines. The sculpture continues into the umbilicus and there are from one to four rows of bristles about the periphery. Umbilicus narrow, about seven percent of the major diameter, but not overhung by the slight reflexion of the columella margin. Size : 8.2 to 9.6 x 5.6 to 6.4 mm. (Figures, p.1 & p.14) Distribution : KwaZulu-Natal (widespread), Mpumalanga (Lydenburg, Shiluwane), "Cape-Tharfield"

Trachycystis calorama
Melvill and Ponsonby, 1899

Differs from the last species in having a narrower umbilicus, weaker costae and stronger intermediate striolae. Size : 9.4 x 6.0 mm. Distribution : KwaZulu-Natal (Pinetown, Inchanga)

Trachycystis actinotricha

(Melvill and Ponsonby, 1892)

Another shell very similar to *T. loveni* with five whorls, bristles in two rows. Size : 8.2 x 5.6 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Karkloof, Nottingham Road, Richards Bay)

Trachycystis trichostroma

(Melvill and Ponsonby, 1892)

Similar to but smaller than the last three species, with six whorls, umbilicus and sculpture as in *T. loveni*, but the bristles occur plentifully along the whole length of the costae. Size : 6.8 x 4.3 mm. Distribution : Eastern Cape (Port Elizabeth, Tharfield, Amabele Junction)

Trachycystis conisalea

(Melvill and Ponsonby, 1892)

A small, subglobose, narrowly rimate shell with similar sculpture to the last four species but much weaker. The short bristles occur all along the costae in about fifteen rows and the suture is deeply impressed. Size : 6.4 x 4.9 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Nottingham Road, Karkloof, Dargle, Equeefa, Bulwer)

Trachycystis pycnotricha

Melvill and Ponsonby, 1899

Agrees with *T. trichostroma* in shape, size and carination but with less closely coiled whorls and a wider umbilicus. The radial costulae are closer and stronger developing into peripheral flanges, each bearing a short, wavy bristle and the spiral sculpture is weaker. Size : 7.0 x 4.8 mm. Distribution : Eastern Cape (Kowie River, Keurbooms River)

Trachycystis clifdeni

Connolly, 1932

A fair-sized, hirsute, pale corneous brown shell with a slightly exserted spire and a narrowly mamillate apex. Whorls five, almost flat above, sharply angled at the periphery and inflated beneath. First whorl practically smooth, second with faint, close radial striae, which increase rapidly in strength and distance apart, developing on the third into strong, curved, oblique costulae, each bearing on the angle of the periphery a long thin,

horny spine, the intervals between the costulae filled with close microscopic striolae and the whole cut by microspiral grooves. Columella margin scarcely reflexed and not overhanging the very narrow umbilicus. Size : 8.6 x 3.7 mm. Distribution : KwaZulu-Natal (Eshowe)

Trachycystis watsoni

Connolly, 1939

Similar to *T. clifdeni* in form, colour and texture but is larger, with much blunter peripheral angulation and many spiral lines of bristles. There are nearly six whorls and the rounded shoulder is above the median line of the last whorl, first one and a half whorls smooth, remainder sculptured with curved radial riblets, gradually increasing in strength and distance apart, the interstices filled with radial striolae and the whole cut by fine microspiral grooves. The bristles are flat near the body of the shell but taper to sharp points and spiral rows of these are only seen on the very freshest or live taken shells. Umbilicus very narrow and not obscured by an reflexion of the columellar margin. Size : 10.0 x 6.5 mm. (Figure, p.14) Distribution : KwaZulu-Natal (Krantz-kop, Zimbabwe)

Trachycystis placenta

(Melvill and Ponsonby, 1899)

Shell fairly large, pale corneous brown with a slightly exserted spire and five whorls, strongly carinate at the periphery. First one and a half whorls smooth, remainder with coarse, regular, radial striae, the intervals filled with fine striolae, the whole cut by close, regular, microspiral grooves. Umbilicus narrow and there is no marginal reflexion of the columella obscuring it. Size : 11.2 x 4.8 mm. Distribution : KwaZulu-Natal (Nkandhla Forest)

Trachycystis haygarthi

(Melvill and Ponsonby, 1899)

Shell of fair size, inversely fan shaped in outline, milky olivaceous, with a faint, narrow, pale chestnut band just above the periphery. Spire slightly exserted and there are four whorls, strongly keeled at the periphery, first one and a half practically smooth, remainder sculptured as in *T. placenta*,

the radial striolae being weaker and the spiral grooves stronger. Columellar margin scarcely expanded and not obscuring the minute umbilicus. Size : 10.5 x 6.8 mm. Distribution : KwaZulu-Natal (Nkandhla Forest)

Trachycystis proxima

Connolly, 1939

Resembles *T. bisculpta* in colour and appearance, but is barely subrimate. There are five whorls, first one and a half with spiral sculpture but only in very fresh specimens, remainder covered with fine, close, regular, radial costulae, interstices filled with four to six fine, microscopic striolae, and crossed by even fainter spiral grooves, only visible under high magnification. Umbilicus very narrow and almost closed by the reflexion of the columellar margin. Size : 7.0 x 5.1 mm. Distribution : southern Cape (George bush, Keurbooms River)

Trachycystis subpinguis

Connolly, 1922

A small, depressed conoid, glossy, pale corneous shell with six whorls. First one and a half whorls practically smooth, remainder with close, faint, wavy radial striae, the intervals filled with close, faint striolae, crossed by close, faint, wavy microspiral lines. Umbilicus minute and not concealed by the narrowly reflexed columellar margin. Size : 5.7 x 3.6 mm. Distribution : KwaZulu-Natal (Pietermaritzburg, Balgowan, Karkloof) and "Transvaal - Shiluwane district"

Trachycystis alcocki (Melville and Ponsonby, 1895)

A shell with prominent, blunt carination and the aperture does not descend to the base. Whorls six, gradually increasing, prominently carinate at the periphery, the weak costae produced into tiny bristles, interstices filled with striolae and crossed by close, regular spiral lines. There are also about a dozen fairly regular spiral lines of bristles on the body whorl but not in the narrow umbilicus. Size : 8.6 x 5.3 mm. Distribution : Eastern Cape (Kowie, Grahamstown)

Group C (iv) with regular radial sculpture plus spiral sculpture, umbilicus narrow

Trachycystis tollini

(Benson, 1856)

A fairly large, depressed globose, transparent, corneous reddish or yellowish-brown shell with spire little exerted and with nearly six whorls. First one and a half whorls with close, regular, spiral striae, remainder covered with close, slightly curved, weak, flattish, radial striae, crossed by spiral sculpture which becomes undulating on the later whorls and base. Umbilicus minute. Size : 13.0 x 9.2 mm. (Figure, p.14) Distribution : Western Cape (Peninsula, Stellenbosch, Caledon, Gordons Bay, Hermanus, Bredasdorp, Swellendam, Riversdale)

Trachycystis inclara

(Morelet, 1889)

A small, subglobose, semi-transparent, corneous buff shell with five whorls and subconical spire. First two whorls practically smooth, remainder sculptured with weak, slightly curved, oblique striae, crossed on the base by fine, close, microscopic spiral lines. Columellar margin reflexed, almost obscuring the minute umbilicus. Size : 5.0 x 4.1 mm. Distribution : Western Cape (Tzitzikama, Knysna, Van Stadens Pass), Eastern Cape (Port Elizabeth, Port Alfred, Grahamstown, Keurbooms River bush, Port St Johns), KwaZulu-Natal (Enselini Reserve)

Trachycystis shilwaneensis

Connolly, 1922

Similar to *T. inclara* but with a wider umbilicus and stronger spiral sculpture. The shell is pale rufous corneous with five whorls, first whorl practically smooth, remainder covered with close, faint, radial striae, crossed by finer, equally spaced spiral striae. Columellar margin narrowly reflexed half obscuring the narrow umbilicus. Size : 5 to 6 mm x 3.8 to 4.5 mm. Distribution : Northern Province (Ofcolaco, Magoebaskloof, "Shiluwane"?), KwaZulu-Natal (Mont Aux Sources, Nkandla)

Trachycystis junodi

Connolly, 1922

Also similar to *T. inclara* but larger, corneous greenish brown with five whorls, first whorl smooth, remainder covered with close, regular, curved radial striae, crossed by fine spiral striae. Columellar margin narrowly reflexed, almost obscuring the narrow umbilicus. Size : 6.3 to 8.3 mm x 5.4 to 5.6 mm. Distribution : "Transvaal - Shiluwane District", KwaZulu-Natal (Karkloof, Jamesons Drift)

Trachycystis microstriata

Preston, 1912

A small shell similar to *T. inclara* but differing in sculpture which is absent from the first whorl, and then consists of close, fine, slightly curved, microscopic radial striae, gradually increasing in strength and about every seventh slightly stronger than those in between, and equally close, fine microscopic spiral lines which cut the radial sculpture and impart a regular microscopic granulation. There are four and a half whorls and the shell is corneous yellow-brown. Umbilicus narrow. Size : 4.5 x 3.0 mm. Distribution : Western Cape (Knysna), Eastern Cape (Dwesa, Coffee Bay), KwaZulu-Natal (Ingeli Bush near Kokstad, Jamesons Drift).

Trachycystis ariel

(Preston, 1910)

This species was renamed *T. ambigua* by Connolly in 1922 but according to Dr van Bruggen and Dr Vercourt the earlier name is still valid. The shell has an elevated spire, is carneo-corneous in colour with four or five rapidly increasing whorls. First whorl smooth, remainder with extremely close, straight, microscopic radial striae, crossed by microspiral lines cutting the radial sculpture, more noticeable on the later whorls. Margin of columella narrowly reflexed, almost obscuring the minute umbilicus. Size : 3.5 to 4.5 x 2.7 to 3.7 mm. (Figure, p.14) Distribution : KwaZulu-Natal (Hluhluwe, Enseleni), also Mozambique and Zimbabwe.

Trachycystis glanvilliana

(Ancey, 1893)

Similar to *T. teretiuscula* but smaller

with the same number of whorls. The shoulder at the suture is sharper and the radial sculpture is weaker and cut by microscopic spiral lines, barely visible on the upper surface but stronger on the base. Umbilicus narrow. Size : 2.7 to 3.2 x 1.8 to 2.5 mm. (Figure, p.16) Distribution : Eastern Cape (Grahamstown, Port Elizabeth, Port Alfred, East London, Peddie, Blaauwkrantz, Martindale, Dixon's Bush)

Trachycystis mediocris

Connolly, 1939

A depressed globose, fragile shell, pale chestnut above with occasional pale transverse streaks and paler on the base. Spire not much exerted and with five to six whorls, regularly increasing, first one and a half smooth, remainder with fine close straight, radial striae, of varying strength and stronger on the base near the labrum, and much finer microspiral lines. Columellar margin reflexed over the narrow umbilicus. Size : 7.8 x 5.5 mm. (Figure, p.16) Distribution : Western Cape (Bredasdorp, "Salt River")

Trachycystis lunaris

Connolly, 1939

A nearly circular shell, transparent and pale olivaceous buff with six gradually increasing whorls, rounded at the periphery. First whorl practically smooth, remainder sculptured on the upper surface with fine, close, regular, curved and oblique radial striae but weaker on the base and fine microspiral lineation. Columellar margin scarcely reflexed but obscuring the minute umbilicus. Size : 5.6 to 7.0 x 3.5 to 4.5 mm. (Figure, p.15) Distribution : Eastern Cape (Cathcart, Atherstone, Donkerbosch, Grahamstown, Port St Johns), KwaZulu-Natal (Bulwer, Ladysmith, Ingeli Bush)

Trachycystis erythrae

Connolly, 1912

A depressed, conoid, thin, dull, pale cream shell, decorated on the upper surface with irregular reddish rays and streaks. Spire slightly exerted, apex narrowly rounded. There are five to six whorls, gradually increasing, rounded but slightly angulate at the periphery; first two with close, fine

microspiral and microradial striae. On the later whorls the radial sculpture becomes stronger, slightly oblique and curved and the spiral weaker and both fainter on the base. Suture shallow. Margin of the columella reflexed, almost obscuring the narrow umbilicus. Size : 7.2 to 10.1 x 5.2 to 6.8 mm. Distribution : Western Cape (Caledon, Die Kelders near Gaansbaai, Strandfontein)

Trachycystis capensis

Pfeiffer, 1841

Probably the most frequently found shell in this genus in the former Cape province. The shell is small, depressed globose, usually with a narrow brown band above the periphery and sometimes some small, irregular brown dots and faint radial flames, streaks and patches. Spire moderately exerted, apex narrowly rounded. Whorls five, regularly increasing, convex, rounded at the periphery; first one and a half practically smooth, remainder with close, faint, slightly curved and oblique growth striae with vestiges of microspiral grooves on the base. Columellar margin narrowly reflexed, half overhanging the narrow umbilicus. There are two named varieties; *T. capensis* var. *namaquana* and var. *paludicola*, the former larger at 11.1 x 9.6 mm and the latter is smaller but the author doubts the validity of these varieties. Size : (average of many specimens) 9 to 10 x 8 to 9 mm. (Two Figures, p.14) Distribution : Northern Cape (Namaqualand), Western Cape (Peninsula and along south-east coast), Eastern Cape (Port Elizabeth, Kenton-on-Sea, Dwesa)

Trachycystis uitenhagensis

(Pfeiffer, 1846)

Larger than the normal *T. capensis* at 10.4 x 9.0 mm but not, in the author's opinion, justifying a species status and may be just another variety (Figure, p.15).

Trachycystis lightfootiana

(Melville and Ponsonby, 1909)

Shell large, depressed globose, semi-transparent, pale corneous brown, paler on the base. Spire nearly flat, apex obtuse, whorls convex, rounded

at the periphery and regularly increasing. There are four to five whorls, first smooth, remainder sculptured with close, regular, curved radial striae which increase in strength on the last two whorls and very close, slightly undulating, incised spiral lines; suture simple and well defined. Columella margin reflexed but not obscuring the narrow, deep and open umbilicus. Size : 21 x 13 mm. Distribution : Western Cape (Swellendam, Montagu, Bredasdorp)

Trachycystis barnardi

Connolly, 1939

Very similar to *T. lightfootiana* but of greater diameter with more rapidly increasing whorls. The sculpture is weaker, whorls less convex, suture more shallow and umbilicus narrower and less open. The shell is large, depressed globose, glossy, corneous olive with spire little exerted. Whorls five, regularly increasing, radial sculpture weak, irregular growth wrinkles and spiral sculpture, when visible, similar to that of *T. lightfootiana* with fairly strong, close spiral grooves below the suture and on the base. Suture well defined. Marginal reflexion of the columellar margin half overhanging the narrow umbilicus. Size : 23 x 14 mm. (Figure, p.15) Distribution : Western Cape (Zwartberg Pass)

Trachycystis oconnori

(Preston, 1912)

Shell subglobose, transparent, pale corneous yellow, spire slightly exerted, apex obtuse. There are four whorls, rather flat above and inflated below the periphery, rapidly increasing and rounded at the periphery. Protoconch nearly two whorls, covered with close, fine, microscopic spiral and radial lines, extremely faint as to be scarcely visible under twenty-fold magnification on fresh specimens, remaining whorls sculptured above with close, regular, curved, oblique radial striae, cut by equally close, grooves, visible under a weak lense; on the base the radial striae are much weaker and the spiral hardly visible; suture simple, narrowly impressed. Columellar margin minutely reflexed so that there is practically no rimation. 11.8 x 8.5 mm. Distribution : Western Cape (Ceres)

Trachycystis contrasta

Sirgel, 1980

Shell thin, imperforate, dark corneous brown to reddish brown, transparent and smooth. Spire depressed globose, little exerted, apex obtuse. Whorls four and a half, regularly increasing, rounded at the periphery. Suture simple, shallow. First one and a half whorls smooth, next half with weak growth wrinkles, remainder with close, straight, oblique, radial striae, crossed by spiral lines extending over the entire surface of these whorls. They are spaced about twice as far apart as the weaker radial striae and are stronger for the first twelve dorsal lines but become close and weaker so that the radial sculpture is stronger than the spirals at the periphery. Basal sculpture is similar to the peripheral, becoming stronger towards the columella while the spirals become more undulating. Size : 8.4 to 10.7 x 6.0 to 7.5 mm. Distribution : Western Cape (Hottentots Holland Nature Reserve)

Trachycystis leucocarina

Sirgel, 1980

Shell thin, imperforate, corneous dark brown or yellow brown, transparent, glossy and smooth. Spire depressed but each whorl rises above the following one and thus not discoid. Whorls slightly compressed but gaining rather rapidly in height. Suture deeply channelled with the result that the whorls are narrowly shouldered dorsally, the shoulder constituting the outer edge of the sutural channel. Base of shell rounded, peristome simple and acute. Labrum nearly straight and vertical in profile. Columella white, thickened but not reflexed, slightly inclines to the left. Apex obtuse. First one and a half whorls with very weak growth wrinkles, remaining whorls with close, straight, radial striae; these striae are crossed by equally spaced spiral lines. Spirals of the same strength as the radial, except for the dorsal group of about eighteen spirals which cover that part of each whorl just radially of the suture; these few dorsals are almost twice as strong as those lower down on each whorl. Size : 9 to 12 x 7 to 9 mm. Distribution : Western Cape (Hottentots Holland)

GLOSSARY

- canaliculate** - channeled eg. of suture
carinate - angled or keeled
corneus - hornlike
costae - continuous ridges or ribs
costulae - finer than costae but not as fine as striae
discoïd - flattened, button-like
exserted - projecting
imperforate - umbilicus absent or not visible
incised - cut in (usually grooves or striae)
labrum - outer lip of aperture
lamellae - thin plate or flared axial projection; foliation
laminae - thin plate or plates built up in layers
lirae - ridges
malleate - appearing as if hammered
mammillate - breast-shaped
orbicular - circular
periostracal - comprised of periostracum
peristome - rim or lip around aperture
plicae - small fold in the aperture
punctate - covered with small pits or raised dots
radial - extending from the apex or axis of coiling
reflexion - edge of aperture lip is curved back on itself
rima - very small hole at site of umbilicus
rimate - with a very small hole or slit, eg. at site of umbilicus
reticularly - network of lines crossing obliquely
rufous - red or pale red
striae - furrows, grooves
striolae - finer than striae, microscopic
subcanaliculate - not quite canaliculate
subglobose - not quite spherical
subrimate - not quite rimate
suture - line of juncture between whorls

Trachycystis centrifuga

Melville and Ponsonby, 1903

Shell transparent, corneous brown with straight-sided, subconical spire, rather strong peripheral carination and very narrow umbilicus. Whorls five, regularly increasing, first one and a half with coarse, close, microscopic spiral grooves, remainder with strong, sharp, regular, rather distant, curved radial costae, gradually becoming farther apart and developing short, vertical peripheral flanges, ending in a short bristle, the interstices filled with a continuation of the strong spiral grooving; suture simple, impressed. Columellar margin narrowly reflexed, half concealing the narrow umbilicus. Size: 7.8 x 5.4 mm. Distribution: Eastern Cape (Bedford, Amatola Mts), Western Cape (Knysna)

Trachycystis knysnaensis

Preston, 1912

The shells of this species resemble *T. centrifuga* in all respects except that the sculpture is rather weaker and the sides of the spire very slightly convex. Founded on a series of small specimens, probably less than half mature. Size: about 4 x 2.3 mm. Distribution: Western Cape (Knysna)

Trachycystis aprica

(Krauss, 1848)

Smaller than *T. lygaea* with weaker radial sculpture, rather blunter peripheral carination and a narrower umbilicus. There are five rapidly increasing whorls, first densely micromalleate, remainder with faint, curved, oblique radial striae, with stronger growth lines at regular intervals, cut by regular spiral grooves which increase in strength and distance apart on the later whorls and, on the base the radial striae are

more regular and of equal strength and the spirals are more regular. The spirals are absent in the umbilicus. Size: 5.2 to 8.3 x 4.9 to 5.3 mm. (Figure, p.15) Distribution: KwaZulu-Natal (Durban, Ingeli Bush, Umlanga, St Lucia)

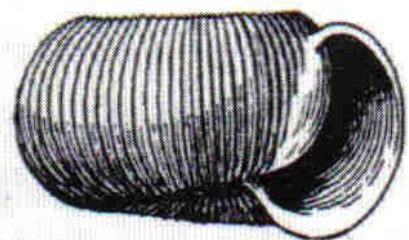
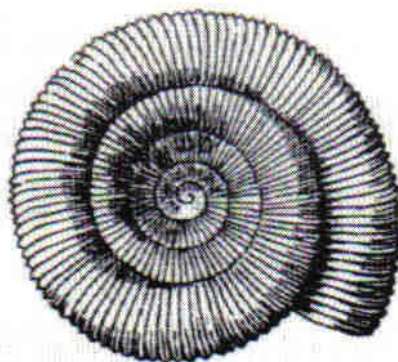
Trachycystis delicatula

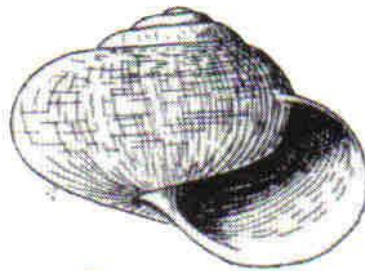
(Melville and Ponsonby, 1895)

Shell comparatively large, depressed globose, imperforate, transparent corneous red-brown. Spire little exserted, apex broadly rounded. Whorls five, nearly flat, rounded at the periphery and regularly increasing. First two almost smooth except for weak microscopic growth wrinkles, which gradually become stronger and crossed on the later whorls by close, regular, spiral lines; basal sculpture similar; suture simple. Columella oblique, concave, thickened but not reflexed over the narrow umbilicus. Size: 16.0 x 9.7 mm. Distribution: Western Cape (Knysna, Humansdorp, Keurbooms R.)

Illustrations

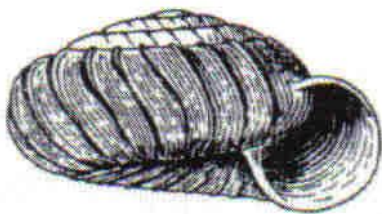
The drawings on page 1 were prepared by Don Aiken and H.E. van Hoepen. The illustrations on the bottom of page 13 and top left of page 14 are from Barnard's 1951 publication *A Beginners Guide to South African Shells*. The large illustration of *T. ariel* on the lower left of page 14 is from van Bruggen's 'Molluscs of Zululand', *Zoologische Verhandelingen*, vol.103, 1969. The illustrations on pages 15 and 16 are from Connolly's monograph, 'A monographic survey of South African non-marine molluscs', *Annals of S. Afr. Museum*, vo.33, 1939.

*T. charybdis*



T. tollini

Illustrations below and on pgs. 15 and 16 are from Connolly (1939)



T. sabuletorum



T. capensis



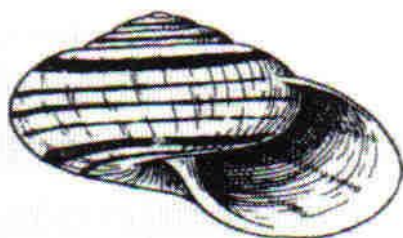
9.

T. conica

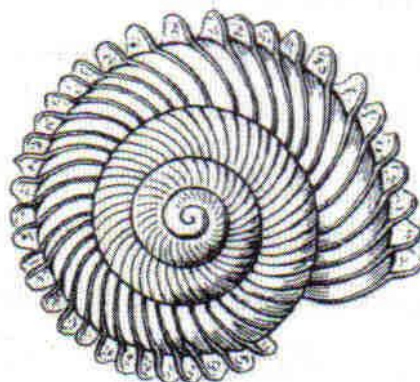


5

T. africae



T. menkeana



T. scolopendra



10.

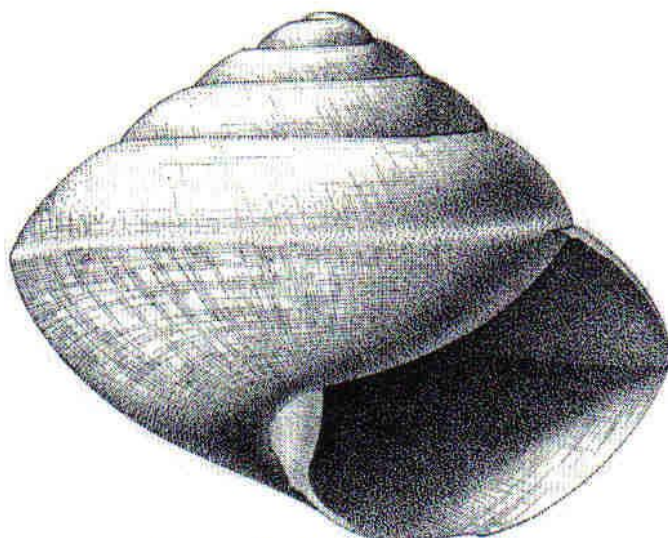
T. loveni

Illustrations above and on pg. 13 are from Barnard (1951)



11

T. watsoni



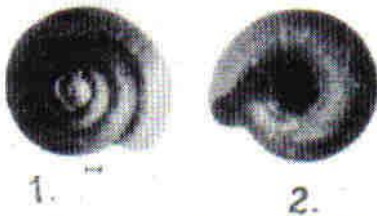
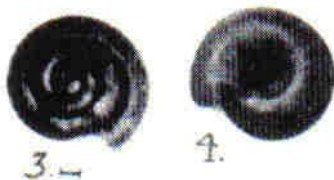
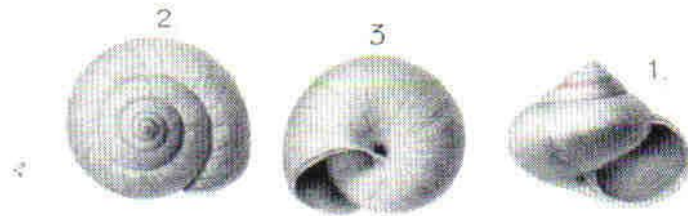
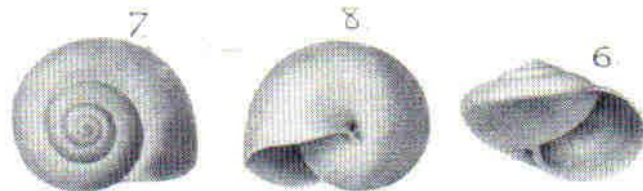
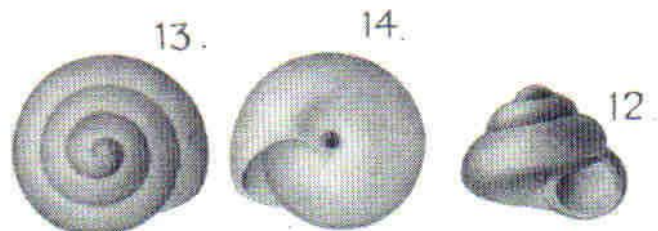
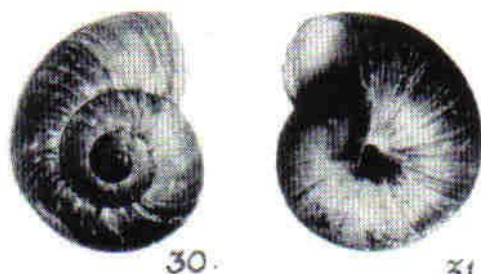
T. ariel

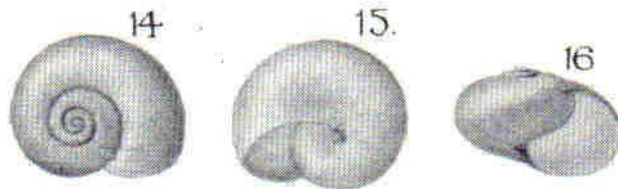
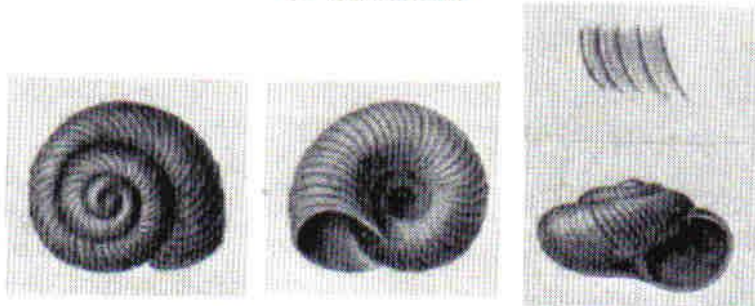
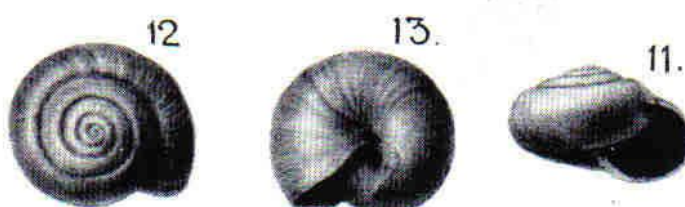
Illustration from Van Bruggen (1969)



4.

T. capensis
var. namaquana

*T. soror**T. rivularis**T. densestriata**T. mcdowelli**T. vengoensis**T. pura**T. uitenhagensis**T. barnardi**T. aprica**T. lunaris**T. microscopica**T. gilliana*

*T. rubra**T. viridula**T. gemmascabra**T. glauvilliana**T. falconi**T. mediocris*

Conchological Society of Southern Africa

Founded 1958

Correspondence to:

7 Jan Booysen Str., Annlin,
PRETORIA 0182, South Africa

Membership (incl. *Strandloper*)

- ordinary members R50
- overseas members US\$25
- pensioners & scholars R25

Office bearers

- President: Prof. DG Steyn
- Vice-President: Mrs L.v.den Berg
- Director: Dr M.Cortie
- Treasurer: Mr W.P.Kruger
- Secretary: Mr L.Smith
- Editor: *Strandloper*: Dr M.Cortie

DURBAN

Mrs A.Carcenac, 6 Highfield Dr.
Westville 3630. 031-86-1040

PORT ELIZABETH

Mr B.Hayes, 10 Munro St., Millard
Grange, Port Elizabeth 6001
041-33-4521

EAST LONDON

Mr N.Newman, 42 Irvine Rd.,
Bonnie Doon, East London 5241.
0431-35-2825

PIETERMARITZBURG

Mr K. Borland, 29A Ashmore Rd,
Chase Valley Heights,
Pietermaritzburg 3201
0331-69-739

BLOEMFONTEIN

Ds. H van der Walt, P.O. Box 8991,
Bloemfontein 9300.
051-446-4244

PRETORIA

Mr L.Smith, 7 Jan Booysen Rd,
Annlin, Pretoria 0182.
012-567-5543

SOUTHERN NATAL

Mr G.Wallace, PO Box 513, Port
Shepstone 4240. 0391-51-100

CAPE TOWN

Mr V.Millard, PO Box 27208, Rhine
Rd., Cape Town 8050.
021-61-4613