Notes on Ptychotrema (Ennea) bequaerti (Dautzenberg & Germain)

by
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The genus *Ptychotrema* (Mörch) L. Pfeiffer, 1853, which has a great number of representatives in tropical Africa, is characterized among the Streptaxidae by one or more deeply situated palatal folds indicated externally by an equal number of spiral furrows on the back of the last whorl. It is subdivided into three subgenera, *Ptychotrema* s. str., *Ennea* H. & A. Adams, 1855, and *Parennea* Pilsbry, 1919. [1])

Ptychotrema s. str. has the aperture with 3 or more folds or teeth within the outer lip, at least one suprapalatal fold, and two spiral furrows on the back of the last whorl.

Ennea H. & A. Adams has the aperture with 2 palatal folds, no suprapalatal fold or tooth, and 2 spiral furrows on the back of the last whorl.

Parennea Pilsbry has the aperture with only one palatal fold, and one furrow on the back of the last whorl.

To the subgenus *Ennea* belong 20 specimens which I found in a box of humus collected for me by the Rev. Father CHR. VAN DER HOF in the middle of January 1953 at Yanonge, Belgian Congo (fig. 1). To these specimens I could apply the name *Ptychotrema* (*Ennea*) *bequaerti thysvillense* Pilsbry (fig. 2).

The species — *Ptychotrema bequaerti* — was described by DAUTZENBERG & GERMAIN (1914, p. 5, pl. 3 fig. 14) from 4 specimens collected at Lisala (or Lissala), and 2 specimens collected at Malema [2]) by Dr. JOS. BEQUAERT.

[1]) See: PILSBRY, 1919, and THIELE, 1931.

[2]) The situation of Malema, as mentioned by PILSBRY (l.c., p. 18) in his List of Approximate Location of Places, i.e. 2° N, 21° 30' E, does not agree with the geographical position of Malema on his Map of Equatorial Africa (l.c., p. 13), which is 2° N, 23° 30' E. This latter indication is, I think, correct.

The subspecies *thysvillense* was described by PILSBRY (1919, p. 208) from 2 specimens collected in a cave near Thysville by HERBERT LANG and JAMES P. CHAPIN. It is figured by the author (text-fig. 76), and differs from the species only by the very low inward continuation of the angular lamella and the decidedly closer ribbing. According to PILSBRY (l. c.) the species has only 4 riblets and intervals, and the subspecies $5\frac{1}{2}$ to 6 riblets and intervals, in one millimeter on the face of the penultimate whorl.

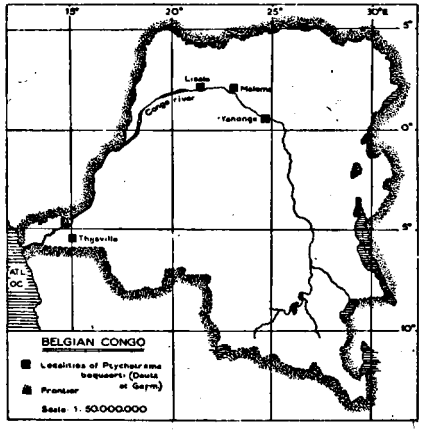


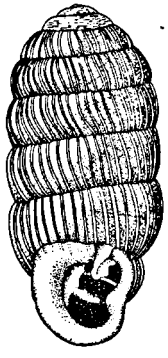
Fig. 1. Map showing the localities hitherto known of *Ptychotrema (Ennea) bequaerti* (Dautz. & Germ.)

In my specimens from Yanonge there are as many as 5.7 to 7.5 riblets and intervals in one millimeter on the front of the penultimate whorl. For the rest I can find no real differences between them and the species. My specimens (Coll. VENMANS no. 6333) of *Ptychotrema bequaerti thysvillense* have been found only a short distance from the type localities of the species — Lisala and Malema —, whereas the subspecies was hitherto only known from Thysville, which is situated a very great distance from the other localities. In my opinion we have not to do with a real geographical subspecies, but with the same species, of which quite accidentally only some extreme specimens have been found. Therefore I will refer to the form described by PILSBRY as *Ptychotrema bequaerti* forma *thysvillensis*.

DAUTZENBERG & GERMAIN (l. c.) mention the following measurements: height of shell: 5.8 mm, major diameter of shell: 2.5 mm,

height of aperture: 1.6 mm, breath of aperture: 1.6 mm, number of whorls: 7.

PILSBRY (l. c.) gives for the species the following measurements: height of shell: 6.1 mm, diameter of shell: 2.5 mm, number of whorls: 7¾. Of the two specimens hitherto known of the forma *thysvillensis* the measurements are according to PILSBRY (l. c.): height of shell: 6.2 (type) and 5.4 mm, diameter of shell: 2.6 (type) and 2.7 mm, whereas the number of whorls is 7¾ (type) and 7¼.



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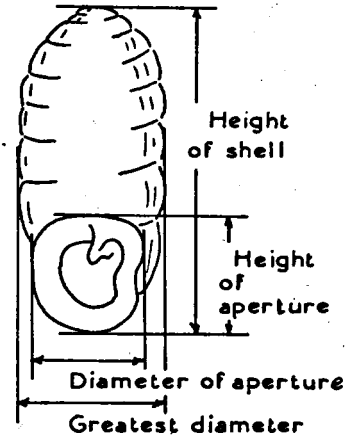

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Fig. 2. *Ptychotrema (Ennea) bequaerti* (Dautz. & Germ.) forma *thysvillensis* Pilsbry. Yanonge, Belgian Congo.
Fig. 3. Method of measurement.

The mean measurements of the specimens from Yanonge are as follows: height of shell: 5.54 mm, major diameter of shell: 2.61 mm, height of aperture: 1.63 mm, breadth of aperture: 1.75 mm, number of whorls 7.42.

I measured my specimens with the aid of a drawing apparatus placed on the right ocular of a binocular microscope. Fig. 3 shows the method of measurement. In Table I the total height of the shells, the greatest diameter, the height of the aperture and its breadth are given in millimeters. The index figures are found by dividing 100 times a certain measurement by the total height of the shell.

For each series of measurements I calculated the mean and the standard deviation, which may be found at the base of Table I. In the population of Yanonge the standard deviation of each value. and therefore the variation of the species in this locality, appears to be very slight.

TABLE I

Number	Height of shell	Maj.diam. of shell	Index	Height of aperture	Index	Diameter of aperture	Index	Whorls	Ribs in 1 mm
1	5.77	2.61	45	1.58	27	1.87	32	7¾	7
2	5.42	2.68	49	1.61	29	1.81	33	7	7
3	5.65	2.52	45	1.65	29	1.74	31	7¾	7
4	5.26	2.58	49	1.39	26	1.65	31	7¼	6.5
5	5.68	2.61	46	1.65	29	1.81	32	7¾	6.6
6	5.35	2.65	49	1.48	28	1.55	29	7¼	6.7
7	5.58	2.52	45	1.68	30	1.68	30	7¼	6.7
8	5.65	2.48	44	1.65	29	1.71	30	7¼	6.6
9	5.71	2.61	46	1.77	31	1.77	31	7¾	7
10	5.71	2.65	46	1.65	29	1.77	31	7¾	6.2
11	5.16	2.61	51	1.61	31	1.87	36	7	5.8
12	5.35	2.68	50	1.71	32	1.77	33	7¼	6.3
13	5.61	2.68	48	1.77	32	1.71	30	7¼	5.7
14	5.55	2.58	47	1.61	29	1.68	30	7¼	7.5
15	5.52	2.71	49	1.68	30	1.77	32	7¼	6.6
16	5.58	2.61	47	1.58	28	1.84	33	7½	6.9
17	5.68	2.68	47	1.68	30	1.74	31	7¾	6
18	5.45	2.52	46	1.65	30	1.68	31	7½	6.7
Means	5.54	2.61	47.17	1.63	29.39	1.75	31.45	7.42	6.6
Deviation	0.16	0.06	1.92	0.09	1.53	0.08	1.56	0.26	2.02

Table I. Measurements of the specimens of *Ptychotrema* (*Ennea*) *bequaerti* (Dautz. & Germ.) forma *thysvillensis* Pilsbry from Yanonge, Belgian Congo.

DAUTZENBERG & GERMAIN (l. c.) do not mention whether the figures they give of the measurements refer to the type specimen or to the mean of their 6 specimens. Their figures agree fairly well with the means I found, and remain within the limits of the Yanonge specimens, except the total height of the shell. This, however, exceeds my largest specimen by 0.03 mm only; the difference may, therefore, be due to rounding off the figure. PILSBRY, however, gives the height of the original shell he measured as still 0.3 mm more.

For the forma *thysvillensis* the figures PILSBRY mentioned lie also within the limits of variation of the specimens of Yanonge,

except the height of the type specimen, which exceeds my largest shell by about 0.4 to 0.5 mm.

Summarizing we see that the measurements of the specimens, as well of the species as of the forma *thysvillensis*, show very little difference in the populations of the various localities. This also is an indication that the forma *thysvillensis* is only an accidental variety, and not a real subspecies.

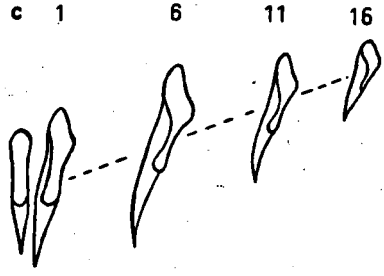

Fig. 4. Representative teeth from the radula of *Ptychotrema (Ennea) bequaerti* (Dautz. & Germ.) f. *thysvillensis* Pilsbry × about 900.

Description of the radula (fig. 4).

The length of the radula is about 1.3 mm, the breadth about 0.2 mm. There are nearly 90 cross-rows, which form an angle of about 100° in the middle. Each row contains about 21 + 1 + 21 overlapping unicuspid teeth. The central tooth is rather small and slender. The inner laterals are larger than the rhachis, with long, sharply pointed, curved cusps; they increase slightly in size from the first to the sixth or eighth tooth, and then gradually decrease towards the margin of the radula, where they become much smaller, with shorter and straighter cusps. On the middle of the lateral teeth there is a blunt knob, which disappears on the outermost teeth.

REFERENCES

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