

LYMNAEA COLUMELLA: TWO NEW BRAZILIAN LOCALITIES IN THE STATES OF AMAZONAS AND BAHIA

W. LOBATO PARAENSE

The occurrence of Lymnaea columella is recorded in Tefé, Amazonas state, where it was found together with Drepanotrema anatinum, Physa marmorata and Pomacea sp.

L. columella was also collected in Salvador, Bahia state, at the Dique do Tororó, an urban lake formerly mentioned (as "lac Baril") by Moricand (1853) as a breeding-place of Biomphalaria glabrata, Drepanotrema cimex, D. depressissimum, Pomacea lineata, P. decussata and Ancyclus moricandi. The four first-mentioned species, as well as Physa cubensis and Hemisus brasiliensis, were also collected now. This is the first record of a lymnaeid in the Northeastern region of Brazil.

Key words: Gastropoda – *Lymnaea columella* – *Physa* – *Drepanotrema* – *Pomacea* – *Hemisus*
– Brazil – geographical distribution

Until recently, no species of the family Lymnaeidae had been referred to northeastern and northern Brazil and the Guianas. This fact seemed to reflect a real situation, since a good deal of collecting had been done in the area by workers of domestic and foreign institutions (Paraense, 1982). A survey of the distribution of *Lymnaea viatrix* and *L. columella* in the Neotropical region (Paraense, 1982) showed that the last-mentioned species was widely spread through the southern half of Brazil and had its northern limit at 16°40'S (Goiânia, Goiás state). However, it was subsequently found as far north as Manaus (3°08'S, 60°01'W) and Benjamin Constant (4°22'S, 70°02'W), in the Amazonas state (Paraense, 1983).

On 13 May 1985 I collected five specimens of *Lymnaea columella* attached to floating pieces of decaying wood in Lake Tefé, at the Xidarenin district of the town of Tefé (3°22'S, 64°42'W), Amazonas state, midway between Manaus and Benjamin Constant. Other snails also present were *Drepanotrema anatinum*, *Physa marmorata* and *Pomacea* sp. The littoral vegetation was not abundant, there being some predominance of *Eichhornia*.

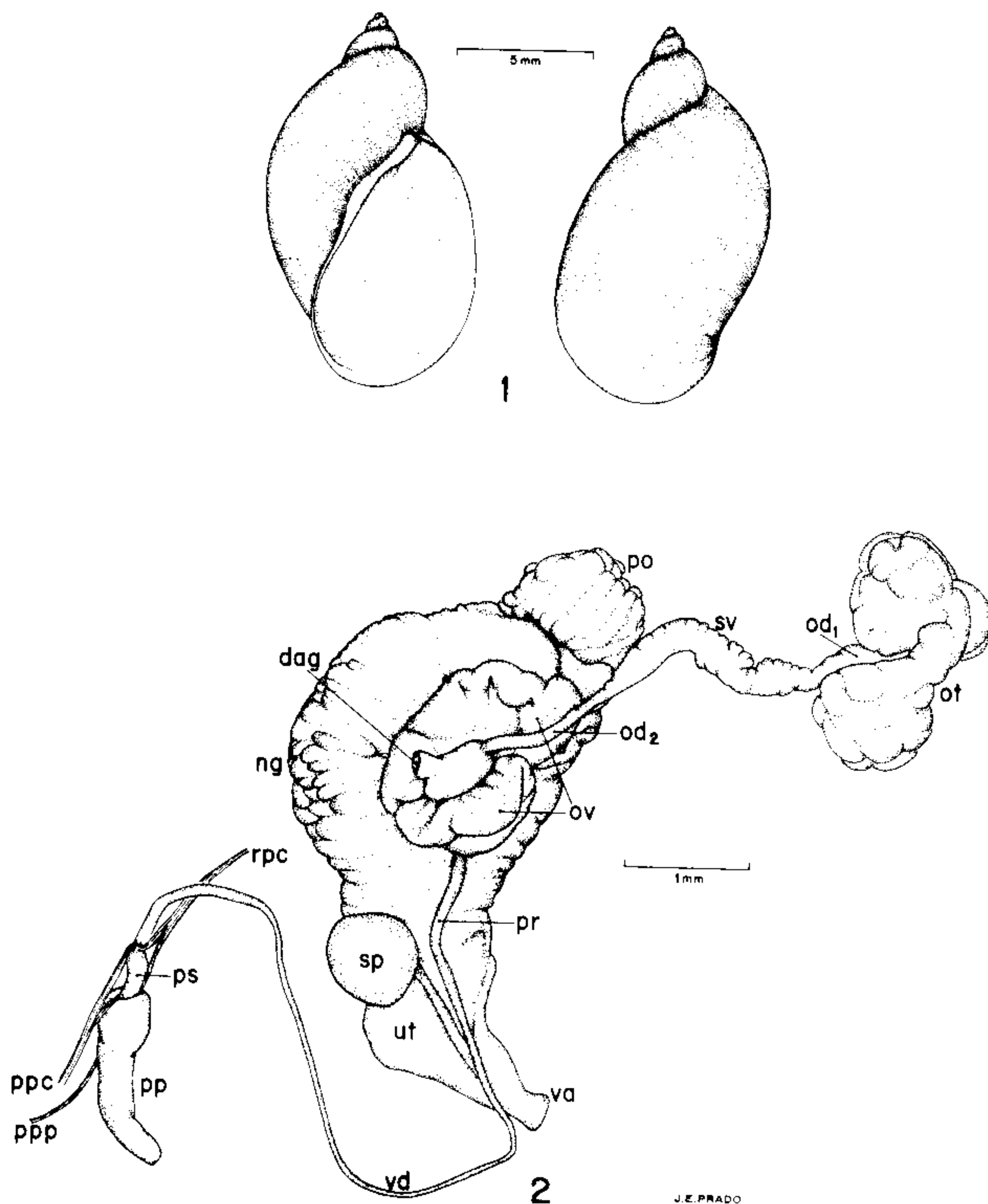
The specimens of *L. columella* were similar, in shell and anatomic characteristics, to those of Manaus and Benjamin Constant (description in Paraense, 1983). The largest shell was 9 mm in length and 4.5 mm in width.

The occurrence of this lymnaeid at the two ends and the middle of the Solimões river (the Brazilian section of the Amazon between the Peruvian border and the mouth of the Negro river) suggests that it may be also present in other localities throughout the river basin.

On collecting snails in the city of Salvador (12°59'S, 38°31'W), Bahia state, on 8 October 1985, I was surprised to find a population of *Lymnaea columella* in the Dique do Tororó. The snails were fairly frequent, and the largest collected specimen is shown in Fig. 1 (shell, 14 mm long and 7.5 mm wide) and Fig. 2 (genital system).

The Dique do Tororó, now an urban lake, was once part of a long defensive ditch built by the early European settlers of Salvador. It was mentioned by Spix & Martius (1828:636) as a breeding ground for the caiman *Jacaretinga moschifer* Spix (no longer existing there), a synonym of *J. palpebrosus* (Cuvier) according to Carvalho (1955). It was described in some detail by Moricand (1853), in his paper on *Planorbis dentifer* (a synonym of *Biomphalaria glabrata*, as shown by Paraense, 1964), under the name of "lac Baril" owing to its proximity to the Barris district. Other species also present in the lake and mentioned by Moricand (1853) were *Biomphalaria glabrata* (as *Planorbis olivaceus*), *Drepanotrema cimex*, *D. depressissimum*, *Pomacea lineata*, *P. decussata* and *Ancyclus moricandi*.

Up to about 15 years ago the Dique do Tororó abounded with aquatic vegetation, predominantly *Eichhornia* and *Pistia*, supporting an enormous population of *Biomphalaria glabrata*. Deepening and straightening of the margins, clearance of practically all aquatic vegetation and introduction of *Tilapia*, resulted in drastic reduction of the snail population. During our last search, however, appreciable numbers of *B. glabrata* could be seen among decaying leaves of surrounding trees and rubbish of every kind thrown in the lake. *Lymnaea columella* and *Physa*



Lymnaea columella from Salvador, Bahia. Fig. 1: shell. Fig. 2: genital system, albumen gland removed (dag = duct of albumen gland, ng = nidamental gland, od₁ = proximal portion of ovispermiduct, od₂ = distal portion of ovispermiduct, ot = ovotestis, ov = oviduct, po = pouch of oviduct, pp = prepuce, ppc = protractor muscle of penial complex, ppp = protractor muscle of prepuce, pr = prostate, ps = penial sheath, rpc = retractor muscle of penial complex, sp = spermatheca, sv = seminal vesicle, ut = uterus, va = vagina, vd = vas deferens).

cubensis were also easily found; *Drepanotrema cimex*, *D. depressissimum* and *Pomacea lineata* were less frequent. The dominant snail, however, was a thiarid similar in shell characteristics to *Melanopsis brasiliensis* Moricand, 1839, referred to as *Hemisinus brasiliensis* by Ihering (1902). This snail was first collected from the Dique in 1981 by Dr. Italo Sherlock, of the Centro de Pesquisas Gonçalo Moniz, Salvador, who sent a sample for identification to the author, pointing out that it was very abundant. This thiarid, as well as *Lymnaea* and *Physa*, were not mentioned by Moricand (1853) among the molluscs collected from the Dique (Baril lake) by his correspondent, M. Blanchet.

Thus far the available records had pointed to the occurrence of lymnaeids over the Southern, Southeastern, Central-Western (Paraense, 1982) and Northern (Paraense, 1983) regions of Brazil. This finding of *L. columella* in Salvador city is the first record of a lymnaeid in the Northeastern region. It should be mentioned, however, that Salvador is situated on the coast and only 0°23' to the north of the limit between the Northeastern and Southeastern regions, really fitting the ecological characteristics of the northeastern area of the latter.

RESUMO

É registrada a ocorrência de *Lymnaea columella* em Tefé, Estado do Amazonas, onde foi encontrada juntamente com *Physa marmorata* e *Pomacea* sp.

L. columella foi também coletada em Salvador, Estado da Bahia, no Dique do Tororó, lago urbano antes mencionado por Moricand (1853) como criadouro de *Biomphalaria glabrata*, *Drepanotrema cimex*, *D. depressissimum*, *Pomacea lineata*, *P. decussata* e *Ancylus moricandi*. As quatro primeiras espécies mencionadas, assim como *Physa cubensis* e *Hemisinus brasiliensis*, também foram agora coletadas. Este é o primeiro registro de um limneídeo na região Nordeste do Brasil.

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