

The first record of adult lung flukes *Paragonimus* in Mexico (Trematoda : Troglotrematidae)

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On revising the literature, the authors have not found any confirmed reports about the presence of human cases of paragonimiasis in Mexico. Recently, Martínez Ráez and Jiménez Galán (1961) recorded their finding of eggs in lung tissue excised from a Mexican male patient of 35 years old. These authors, although cautiously, admit the possibility that those eggs may belong to the genus *Paragonimus*. A previous report by Lara (1913) about the existence of human cases of paragonimiasis in the State of Yucatán, was not confirmed by Sandground (Shattuck, 1933) on examining the preserved lung kept by Dr. Lara from a fatal case.

In 1963 the senior author found 14 adult worms of *Paragonimus* in the lung of one of 11 opossums, *Didelphis marsupialis*, captured in Colima situated in mountainous region on the Pacific Coast of Mexico. These 14 worms were all flattened in spirit and sent to the junior author for identification. They were stained with carmine or hematoxylin and mounted in balsam. Before mounting, small pieces of the cuticle of the worm body were taken off at the dorsal and/or ventral side of the ovary in order to show clearly the shape of the ovary. The largest worm (No. 11) measured 14.5 by 7.0 mm in body size and the smallest (No. 4) 9.3 by 5.5 mm. General structure of the present worm was quite similar to that of the other species of the genus. The arrangement of the cuticular spines and the shape of the

ovary, which are good criteria for species differentiation, were exactly investigated. The majority of spines of the Mexican lung fluke were singly spaced almost all over the body, some of which, however, split into two or more (Fig. 3). The ovary which was smaller than the testis was delicately branched as shown in Figs. 1 and 2.

From the results of investigation and from the geographical point of view, the present species seems to be very close to *Paragonimus kellicotti* Ward, 1908, which is distributed in the United States of America and Canada. But the authors cannot simply identify the Mexican species as *P. kellicotti*, because the branching of the ovary is more delicate in the present specimens than *P. kellicotti* obtained from experimental cats and rats in the United States. The authors are inclined to think that the Mexican species is the same that was found by Caballero (1946, 1957) from the opossum and the skunk in Guatemala and from the fox in Costa Rica, and was identified by him with *Paragonimus rudis* (Diesing, 1850). However, this identification cannot be easily accepted, because the original description of *P. rudis* is too brief to know its morphological characters in detail. On the other hand, it is also unsettled whether or not *P. kellicotti* is identical with *P. rudis*, even though some investigators consider them as the same species. In order to solve these questions, further studies particularly on the life history of *P. rudis* are quite

necessary.

The present report appears to be the first about the existence of the adult *Paragonimus* in Mexico. For the complete identification of the present lung fluke it will be needed to study its metacercaria.

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メキシコにおける肺吸虫成虫の発見

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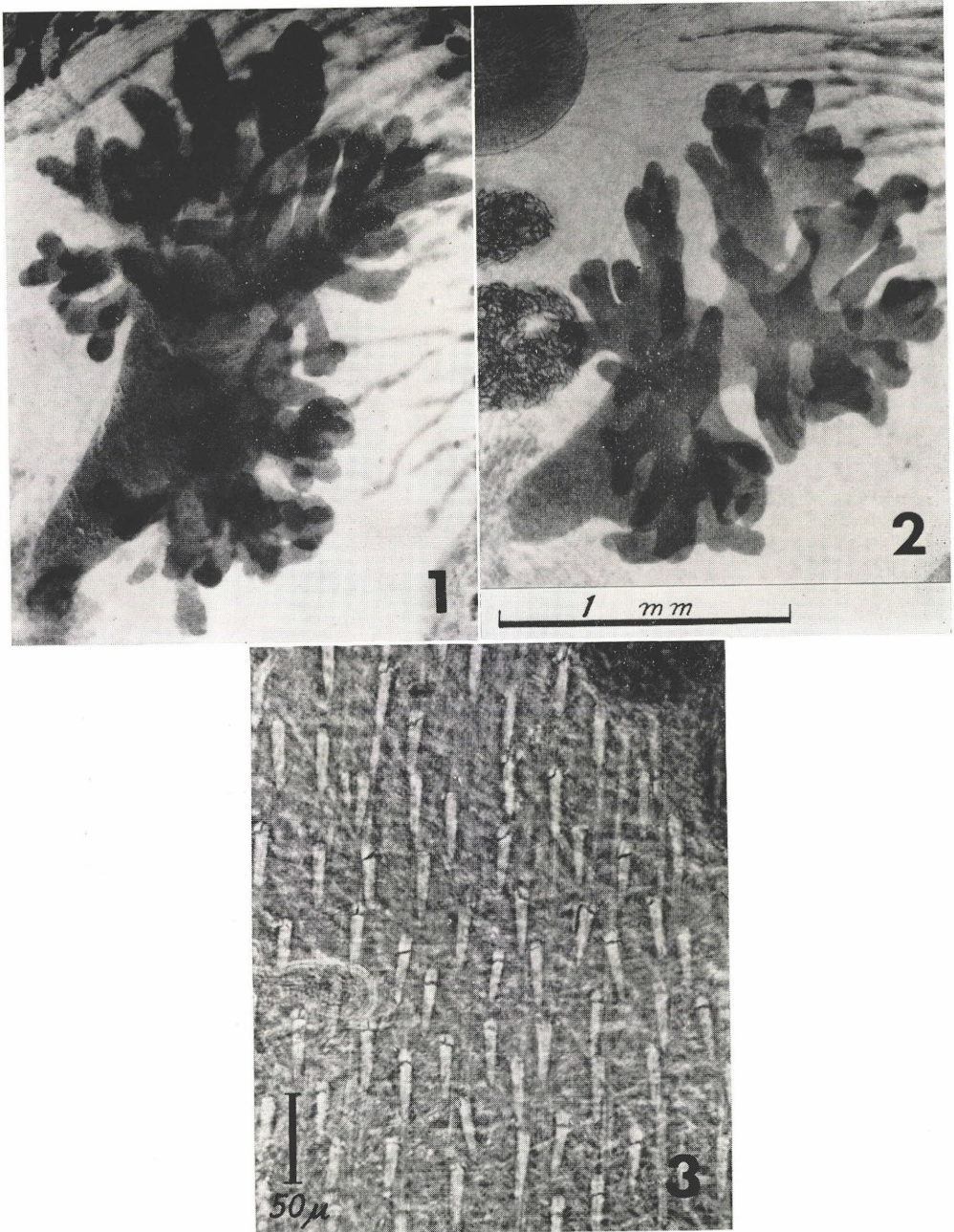
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メキシコに人の肺吸虫症があるという確実な報告はなかつたが、1961年になつて、35歳のメキシコ人(男)から切除した肺組織中に、肺吸虫卵と思われるものが認められた。

われわれは肺吸虫の成虫をえようと努力していたところ、1963年になつて、Mazzotti がメキシコの太平洋岸に近い Colima という所で、11頭のフクロネズミ(学名: *Didelphis marsupialis*) の中の1頭から、14匹の成虫を得ることに成功した。宮崎はこれらすべてを染色して全体標本を作り、精査した結果、体表のトゲは、ほとんどすべて1本ずつはえており、卵巣はかなり複雑に分枝することを知りえた。

結局、本種はケリコット肺吸虫に近いが、卵巣の分枝は、より複雑のように思われ、むしろ、Caballeroによつて、グアテマラのフクロネズミとスカンク、およびコスタ、リカのキツネからとり出されて、*P. rudis* として報告されたものに一致するようである。しかし、*P. rudis* の原記載はきわめてかんたんで、その特徴がわからず、また、これとケリコット肺吸虫との異同も未解決である。

したがつて、ここでは、メキシコで初めて肺吸虫の成虫がえられたことだけを報告し、種名については、メタセルカリアを得たうえで、改めて論ずることにしたい。



EXPLANATION OF FIGURES

Photomicrographs of the Mexican lung fluke. (Photographed by I. Miyazaki).

Figs. 1 & 2. Dorsal view of the ovary of the worms (No. 5 and No. 7).

Fig. 3. Singly spaced cuticular spines on the ventral side (By a phase contrast microscope).