Fish nematodes are important group of parasites, because it can cause several serious diseases. They can infect any part of the fish body, including the body cavity, internal organs, deeper layers of the skin or fins, and external muscle layers as adults or as larvae. During ichthyoparasitological research in several African countries carried out from 2005 to 2013 were revealed, among other parasitic species, nematodes referable to species *Procamallanus laeviconchus* (Wedl, 1862) from family Camallanidae (Camallanoidea). SEM of their outer morphology revealed, that under this name is several morphospecies hidden. *Procamallanus laeviconchus* sensu lato is quite common nematode of various African fish species and has a Pan-African distribution. It has indirect life cycle, crustaceans (copepods) serve as intermediate hosts. Catfishes seem to be the most frequent definitive hosts. Specimens were recovered mainly from stomachs of catfishes from families Mochokidae, Clariidae and partially also from Bagridae (Siluriformes), and citharinids from Citharinidae (Characiformes).

For study of important, however poorly recognizable morphological structures, light microscopy (LM), scanning electron microscopy (SEM) and partially also environmental scanning electron microscopy (ESEM) were used. Samples were prepared by standard methods for SEM and examined using a Quanta TM 250 FEG SEM at an accelerating voltage of 10 kV or JEOL JSM-7401F FE SEM at an accelerating voltage of 4 kV.

All studied procamallanid specimens from different host fish species were medium-sized nematodes with thick, roughly transversely striated cuticle. Some of them showed features as oval mouth with peribuccal flange forming 6 bifid lobes (Fig. 1). Mouth of all samples were usually surrounded by six flat, crescent-shaped elevations, however variously elevated. All samples had 8 submedian cephalic papillae arranged in 2 circles, each formed by 2 papillae, however they differ in number of small small finger-shaped processes on the conical tail. *Procamallanus* spp. are mutually recognizable by mouth opening with or without oral flange (Figs. 1, 2) and by number and shape of projections on tail tips of females. Examination of these nematodes by SEM showed that the material comprise several species new to science.

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Fig. 1: A. Head region of nematode from Distichodus niloticus with peribuccal flange and crescent-shaped elevations. B. Head region of nematode from Clarias gariepinus without peribuccal flange and low crescent-shaped elevations.