Silurian thelodonts from the Niur Formation, central Iran

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Thelodont scales are described from the Silurian Niur Formation in the Derenjal Mountains, east central Iran. The material studied herein comes from four stratigraphic levels, composed of rocks formed in a shallow water, carbonate ramp environment. The fauna includes a new phlebolepidiform, Niurolepis susanae gen. et sp. nov. of late Wenlock/?early Ludlow age and a late Ludlow loganelliiform, Loganellia sp. cf. L. grossi, which constitute the first record of these thelodont groups from Gondwana. The phlebolepidiform Niurolepis susanae gen. et sp. nov. is diagnosed by having trident trunk scales with a raised medial crown area separated by two narrow spiny wings from the lateral crown areas; a katoporodid-type histological structure distinguished by a network of branched wide dentine canals. Other scales with a notch on a smooth rhomboidal crown and postero-laterally down-stepped lateral rims have many characters in common with Loganellia grossi. Associated with the thelodonts are indeterminable acanthodian scales and a possible dentigerous jaw bone fragment. This finding also provides evidence of a hitherto unknown southward dispersal of Loganellia to the shelves of peri-Gondwana.

Key words: Thelodonti, Phlebolepidiformes, Loganelliiformes, palaeobiogeography, Silurian, Niur Formation, Iran.

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