

STRUCTURE OF ENDOSKELETAL GIRDLES OF THE PAIRED FINS IN PLACODERMS.

Mark-Kurik, E. , Inst. of Geology, Estonian Acad Sci., 200101 Tallinn, Estonia; Ivanov, A., Laboratory of Paleontology, Inst. of Earth Crust, Leningrad Univ., 199178 Leningrad, SU; Obrucheva, O. Dept. of Paleontology, Geology Faculty, Moscow Univ., 119899 Moscow, SU

Endoskeleton of the pectoral girdle in many placoderms is well known especially owing to the studies by Stensiö. In all cases it was represented by one ossification, the scapulocoracoid. In the ptyctodont *Ctenurella gardineri* Miles et Young, 1977 it was also described as one unit. In *Chelyophorus verneuili* Ag., 1844 the scapula and coracoid were, however, independently ossified. In their anterior portion at the suture two semicircular articular surfaces occur, placed roughly one above other. They served for attachment of a single basal element of pectoral fin. In *Ctenurella pskovensis* (Obr.), 1947 scapula fused with the anterior lateral plate is found. It may be concluded that in ptyctodonts which do not possess a spinal plate scapula and coracoid occurred as separate units. The endoskeleton of the pectoral girdle in above ptyctodonts resembles that in the acanthothoracid *Weejasperaspis gavini* White, 1978. This form has a large and short articular surface for attachment of a single basal plate. The similarity in structure of the pectoral girdle endoskeleton in representative of different placoderm groups has set forth an idea that in antiarchs the scapulocoracoid was not cartilaginous. A portion of the lateral wall of trunk armour at brachial process (including the process itself) and lacking ornamentation is probably nothing but the ossified endoskeleton of the pectoral girdle completely fused with the exoskeleton. A unique hook-shaped endoskeletal element of the pelvic girdle attached to PVL discovered in *Microbrachius* sp. (D₂, Estonia) evidences that in antiarchs paired fin girdles were ossified.