

Anatomy and relationships of the Triassic temnospondyl *Sclerothorax*

Rainer R. Schoch, Michael Fastnacht, Jürgen Fichter, and Thomas Keller

Acta Palaeontologica Polonica 52 (1), 2007: 117-136

Recently, new material of the peculiar tetrapod *Sclerothorax hypselonotus* from the Middle Buntsandstein (Olenekian) of north-central Germany has emerged that reveals the anatomy of the skull and anterior postcranial skeleton in detail. Despite differences in preservation, all previous plus the new finds of *Sclerothorax* are identified as belonging to the same taxon. *Sclerothorax* is characterized by various autapomorphies (subquadrangular skull being widest in snout region, extreme height of thoracal neural spines in mid-trunk region, rhomboidal interclavicle longer than skull). Despite its peculiar skull roof, the palate and mandible are consistent with those of capitosauroid stereospondyls in the presence of large muscular pockets on the basal plate, a flattened edentulous parasphenoid, a long basicranial suture, a large hamate process in the mandible, and a falciform crest in the occipital part of the cheek. In order to elucidate the phylogenetic position of *Sclerothorax*, we performed a cladistic analysis of 18 taxa and 70 characters from all parts of the skeleton. According to our results, *Sclerothorax* is nested well within the higher stereospondyls, forming the sister taxon of capitosauroids. Palaeobiologically, *Sclerothorax* is interesting for its several characters believed to correlate with a terrestrial life, although this is contrasted by the possession of well-established lateral line sulci.

Key words: *Sclerothorax*, Temnospondyli, Stereospondyli, Buntsandstein, Triassic, Germany

Rainer Schoch schoch.smns@naturkundemuseum-bw.de, Staatliches

Museum für Naturkunde, Rosenstein 1, D-70191 Stuttgart, Germany;

Michael Fastnacht fastnach@mail.uni-mainz.de, Lehrereinheit Paläontologie, Institut


für Geowissenschaften, Johannes- Gutenberg-Universität, D-55099 Mainz,

Germany; Jürgen Fichter jfichter@t-online.de, Naturkundemuseum

Kassel, Steinweg 2, D-34117 Kassel, Germany; Thomas Keller t.keller@denkmalpflege-hessen.de,

Landesamt für Denkmalpflege Hessen, Schloss Biebrich, D-65203 Wiesbaden, Germany.

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