Poster Session III, (Friday)

**OSTEOHISTOLOGY OF THE BASAL PHYTOSAUR *PALEORHINUS* FROM THE LATE TRIASSIC OF SOUTHERN POLAND - A PRELIMINARY RESULTS**

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Phytosauria is a clade of quadrupedal, semi-aquatic crurotarsal archosaurs morphologically and ecologically resembling extant crocodiles. Worldwide distribution of this relatively fast evolving group makes it useful in biostratigraphy of the end of the Triassic. In 1993 a new locality of the Late Triassic age has been discovered near Krasiejów village (Poland). Since then a few specimens of the basal phytosaur genus *Paleorhinus* have been identified, representing cranial and postcranial material belonging to specimens being at the different level of ontogeny. Five femora have been photographed, measured and cross-sectioned following standard procedures used in osteohistological studies. The deep cortex of the smaller specimens is composed of laminar bone tissue with the woven-fibered bone matrix containing oval bone cell lacunae. This indicates fast growth rates during early ontogeny. The Haversian remodeling has not yet begun and the endosteal lamellar bone is visible, deposited centripetally around the medullary cavity. The transition into parallel-fibered bone matrix (mixed oval and elongated, flattened bone cell lacunae) is visible externally to the deep cortex. Towards the epiphysis the compact coarse cancellous bone can be observed. In more mature specimens bone remodeling is evident, being extensive at the endosteal margin and the deep cortex part of the sections. Resorption cavities are large to moderately large with lamellar bone tissue deposited centripetally inside them. One specimen displays lamellar-zonal bone with annuli, composed of avascular bone, and LAGs (Lines of Arrested Growth). Total number of ~9 LAGs is recorded. The zones decrease in thickness towards the periosteum forming an EFS or OCL (External Fundamental System or Outer Circumferential Layer) like structure. Growth pattern deduced from the femoral cross-sections indicate fast growth rates during early ontogeny and later a turnover into slower rates with cyclical growth.