its fauna to Biharian (late Villafranchian).

The comparison of the known Eurasian material each together and with the new specimens allows us to distinguish two clear species in the Neogene / Quaternary: *Hystrix primigenia* (WAGNER 1848) and *Hystrix major* (GERVAIS 1859). The first is characterized by large and robust teeth with simple synclinid I and almost quandrangular occlusal surface. The other species has medium-sized and slender teeth with complicated synclinid I and more or less rounded occlusal surface.

Finally the biostratigraphy of the two species is reviewed. It is proved that *H. primigenia* is a stratigraphic indicator of late Miocene and Pliocene; on the other hand *H. major* is a stratigraphic species of latest Pliocene and early Pleistocene.

THE PETRALONA CRANIUM: C.T.-SCAN FINDINGS

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The Petralona cranium is a very late *Homo erectus* or very early *Homo sapiens*. It is well preserved except some missings in the central bones of the face. We performed a C.T.-scan examination in order to obtain new architectural and morphological features. Two blocks of foam were carved to receive the cranium in determined positions and the C.T.-scan was performed all along the osseous axes with the reference horizontal chosen as the orbito-meatal plane (Frankfurt plane) and the two other planes: frontal and segittal were orthogonal to the horizontal. We obtained more than one hundred sections, each one was photographied and developped at scale one; eight other sections were performed in the occlusal plane at the level of the teeth and alveolar bridge. By morphometry with a grid-point every 10mm, we measured the intra-cranial capacity. The main findings of the C.T.-scan were the semi-circular shape of the vault on the frontal sections, and its thickness of about 10mm in every point; the relationships of the frontal poles of the brain with only the posterior third of the roof of the orbits, witness of a less degree of telencephalisation in comparison with modern man. The sinuses were very large and the frontal sinuses occupied the entire width of the cranium frontward, their total capacity was calculated by morphometry between 60 and 80cc; eight partial sagittal blades inside each frontal sinus came from the front wall and reinforced the structure; the posterior wall of the sinus in contact with the cranial cavity was thicker than the anterior wall. The maxillary sinuses were also very large with a very flat anterior wall, but two many defects make uneasy the calculation of their capacity. The intra-cranial capacity was found in the three series of sections near the real, physical value of 1200 cc with a precision varying from 0,2 to 3,3% depending of the plane and of the degree of the outlines reconstruction necessity. This examination was very

useful to define new characters or to precise grossmorphological features, internal structure, entire architecture, osseous relationships; but is a complementary one which has to be interpreted only in close reference to the original sample.

THE MIOCENE ECHINOIDS OF POLAND

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The Miocene echinoids of Poland (Paratethys) are coming only from Badenian deposits – Middle Miocene; they are occurring in Central, Southern and South-eastern Poland. State of preservation of specimens is various – from completely preserved tests to their fragments and separate elements. Their collections were examined with great care by Mączyńska in 1977-1988 years. The faunistic assemblages of particular regions are dominated by mollusca, the echinoids of this area is an accessory element, but it is also attracts attention by the variability of forms which represent it. Collected fauna is coming from different facies. Is worthy of notice fauna from Korytnica Basin with *Heterostegina* sands (Holy Cross Mountains, Central Poland) where in great number occur representatives of genus *Echinocyamus* PHELSUM and also *Parasalenia fontannesi* COTTEAU. Also on area Rakόw-Klimontόw Shore (Southern Poland) in finesands deposits of Świniary outcrop occur numerous concentrations of echinoids forming shoals, in which dominated representatives of genus *Psammechinus* L. AGASSIZ and DESOR, with a majority of their specimens preserved in their lifetime position, frequently with spines and Aristotle's lanterns. The outcrop at Świniary, different from all other Badenian localities in Poland, can be considered unique in Europe.

The assemblage of echinoids from Poland (Paratethys), from the Badenian – Middle Miocene is represented by 27 species and 6 specificaly indeterminable which belong to 15 genera.

As indicated by the results of geological-paleontolological studies, the Middle Miocene sea was not very deep in the area discussed. The depth of the sea amounted probably about 12 m (at Korytnica Basin), to 30 m in the Roztocze Region, in some places, 100 m. The water had normal or nearly normal salinity, favorable in particular to the development of malacofauna and the water temperature could reach 25°C. The Middle Miocene species of echinoids occurring in Poland are mostly known from the Miocene deposits of France, Ukraina, Hungaria, Greece and Egypt.

