KOVAR-EDER, J. *Vienna*. - **Stratigraphic and Palaeobiogeographic Investigations of Fossil Plant Taxa Reflecting Floristic, Vegetational and Climatic Changes in Europe During Neogene Time.**

The evaluation of stratigraphic and palaeogeographic distribution of fossil plant taxa is based on the database of European/West Asian Tertiary plant localities (currently about 600 sites of leaves and diaspores). The distributional history of several taxa is investigated to interprete climatic changes during the Oligo-/Miocene. Different patterns have been recognized so far:

Laurophyllous taxa present in Europe since the Eocene and disappearing in Central Europe during the (Lower, Middle) Miocene. They are still present at younger sites in S and SE Europe as well as in the Rhenish embayment, where they constitute relicts during Miocene and Pliocene time.

Deciduous taxa that invade Europe during (mostly late Lower, middle to early Late) Miocene time. Some of them appear in the E earlier than in the W. Species of one genus may exhibit almost complementary distribution patterns.

Taxa that invade Europe during the Oligocene and are widely distributed during Miocene time. Therefore, their ecological tolerance is regarded to be greater than that of other taxa.

Taxa indicating a shift in their ecological tolerance.

Neither the time of appearance nor disappearance of the taxa following the delineated patterns is entirely synchronous. More likely they express distinct trends in the floristic and vegetational evolution, reflecting general climatic changes such as decrease in humidity and shift of the periods of precipitation, probable increase of temperature extremes, and decrease of mean annual temperature. Clearly, these changes are among others connected with the regional palaeogeographic development. The causal complexity is not yet fully understood.