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The flora of the Kerecsendi berek forest

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Abstract: A total of 342 vascular plant taxa was found in this locality and its vicinity. The flora of the forest was analysed according to the distribution of species in microhabitats, type of plant geographical area (flora elements) and life-forms. Highest diversity (H') value is given by microhabitats and maximal evenness (J) by life-forms. There are five communities extensive or fragmentary. Species richness is greatest in the Aceri tatarico-Quercetum pubescenti-roboris (hungaricum) and poorest in the Prunetum spinosae community.

INTRODUCTION

The forest "Kerecsendi berek erdő" is situated north of the Great Hungarian Plain and south of the Bükk mountains, near to highway E 96. Its size is 169 hectares. The forest has developed mainly on chernozem soil originated from loess (PINCZÉS 1956). The elevation of this forest varies between 120 and 150 m a.s.s. Annual precipitation is 538 mm, as based on the data of the meteorological station in the village Kápolna near Kerecsend. The loess had developed continuously during the last ice-age (70000-10200) and the process was the most intensive about 20000 years ago MIHÁLTZ (1967), MOLNÁR (1979). The Pannonian floraprovince was covered by loess in the Carpathian Basin. The post-glacial vegetation was removed from the largest part of this area, because the advantageous characters of these soils make it highly suitable for cultivation and grazing. The remaining - more or less undisturbed vegetation spots were thoroughly studied by botanists, first by MENYHÁRT (1877), BOROS (1953, 1959), ZÓLYOMI (1957, 1958), JANKÓ & ZÓLYOMI (1962) in Hungary.

The zonal plant community of the Kerecsendi berek forest, the Aceri tatarico-Quercetum pubescenti-roboris (hungaricum) was investigated and results published by ZÓLYOMI (1957). He also mentioned a fragment of Fraxino pannonicae-Ulmetum community from here between the zonal forest and the Lasko rivulet in the flood-plain near Kerecsend.

Beside these two communities mentioned by ZÓLYOMI (1957), there is a fragment of Polygonato (latifoliae)-Carpinetum in the deeper valley, Prunetum spinosae as a marginal community at the edge of the zonal forest and moreover, a patch of Salvio (nutanti-nemorosae)-Festucetum rupicolae on a relatively wide, 5-7 meters forest road. These latter ones were analysed by SZUJKÓ-LACZA & RAJCZY (1983) in detail. The both forests are contiguous with cultivated land and behind the forest patch are an abandoned formerly deforested area.

The check-list published by ZÓLYOMI (1957) from the Aceri tatarico-Quercetum contains 118 species. Since this publication the area has received strict protection, because it is a remnant of the zonal forest-steppe-forest (cf. ZÓLYOMI l.c.).

According to our studies (SZUJKÓ-LACZA & RAJCZY l.c.) there exists also a true steppe

fragment the main road of the forest. The roads of the forest were opened along almost four hundred years ago. Both communities originate from the boreale period (9600-7300), most probably after the postglacial age (cf. JÁRAI-KOMLÓDI 1968, 1969).

Forest-steppe-forest and continental dry steppe exist in SW Russia over vast region and the floristical elements of these areas reach also the margin of the Great Hungarian Plain and become components of the various communities here. The identical or equivalent species between the SW Russia forest-steppe and steppe and the Kerecsendi berek forest were shown by SZUJKÓ-LACZA & RAJCZY (l.c.), as based on DOHMAN's publication (1968) and their coenological investigation.

The continental species of the forest-steppe forest and steppes also migrated to the southern slope of the Hungarian Central Mountain (JÁRAI-KOMLÓDI l.c.), and mixed there with the relict and endemic steppe and other elements. This migration took place between the Hungarian Central Mountain and the Great Hungarian Plain (KERNER 1863), (BORBÁS 1900).

Knowledge of these floral and vegetational exchanges in general (cf. JÁRAI-KOMLÓDI l.c.) and the question of inner migration of various species in the Carpathian Basin promted me study the flora of the Kerecsendi berek forest.

Moreover, arise the questions: The area has been strictly protected for twenty-five years and the species and communities published by ZÓLYOMI (1957) remained the same or disappeared due to disturbance from man, e.g. effectiveness of the protection.

The check-list presented here also includes some communities exist in fragmentary form a smal abandoned area deforested today, and somewhat greater area around Kerecsend. The behaviour of the species in this area as regard the subtle ecological differences is reflected by the occurrence of these e.g. in forest, margin and road of forest etc that is the distribution of the species in the different micro-habitats.

Frequency distribution of the species by the type of areageography (flora element) and life-form are also presented here. Further I consider the degree of similarity between the Kerecsendi berek forest and the Bükk mountains sensu stricto the Bükk National Park (BNP) in view of the neighbouring geographical location of these regions. Answer to this last question may be given after five or six yearse of study.

MATERIAL AND METHODS

During the year 1981, from 3 April we collected and recorded the species almost every fortnight in the forest Aceri tatarico-Quercetum, the margin and roads of this forest, in steppe spots e.g. Salvio (nutanti-nemorosae)-Festucetum rupicolae, in Fraxino pannonicae-Ulmetum, in Prunetum spinosae, in Polygonato (latifoliae)-Carpinetum and the abandoned deforested area behind the forest. The specimens are deposited in the Herbarium of the Botanical Department of the Hungarian Natural History Museum, Budapest (BP). Data of specimens collected by previous collectors in the vicinity of Kerecsend, e.g. Kál or Kálkápolna, Verpelét and Vép and also housed in the Herbarium Carpato-Pannonicum have also been included.

The grid number of locality is after NICKLFELD (1971): accordingly Kerecsend has the number 8288. The numbers of the other villages are given in the check-list.

The listed species are arranged in alphabetic order. In the nomenclature and the area of the species and also the community names I followed SOÓ (1964-80). The sign of life-form was used after RAUNKIAER (1907). After the species name, the name of the author(s), the village(s), date of literature, name of collector(s), community or communities in which it was found and the date are entered.

The Quercus species were identified by V. MÁTYÁS and the Rosas by G. FACSAR, both alike good specialists of these taxa. Numerous Rosa species were collected and identified by G. FACSAR and will be published here for the first time.

Abbreviations of the communities:

Ac.tat.	Aceri tatarico-Quercetum pubescenti-roboris (hungaricum)
Frax.-Ulm.	Fraxineto pannonicae-Ulmetum
Pol.-Carp.	Polygonato (latifoliae)-Carpinetum
Prun.	Prunetum spinosae
Robinietum	Robinietum pseudo-acaciae
Salv.-Fest.	Salvio (nutanti-nemorosae)-Festucetum rupicolae

Other abbreviations:

Def.	Abandoned deforested area
K.	KOVÁTS, D.
Marg.	Margin of various communities
Road	Road(s) in various communities
SzL.	SZUJKÓ-LACZA, J.
edge of	field or community

The species diversity according to microhabitat, life-form and floral element by SHANNON (1948), the evenness value according to PIELOU were computed.

CHECK-LIST OF SPECIES

Pteridophyta - Filicopsida

Dryopteris filix-mas (L.) Schott - Kerecsend (BP: SzL. in: Frax.-Ulm., 1982).

Angiospermae - Dicotyledones

Acer campestre L. - Kerecsend, ZÓLYOMI (1957) in: Ac. tat.; (BP: SzL. in: Ac.tat., Marg. of Ac.tat., Pol.-Carp. 1981).
var. acutilobatum Tan. - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Acer platanoides L. - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Acer pseudo-platanus L. - Kerecsend (plantation) (BP: SzL. in: Ac.tat. 1981).
Acer tataricum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: Radics 1968, SzL. K. in: Ac.tat., Marg. of Ac.tat., Frax.-Ulm. 1981); between Vécs 8186 and Kál 8287 beside the stream "Tarnóca patak" (BP: Jávorka & Csapody 1961).
Achillea setacea W. et K. - Kál 8287 (BP: THAISZ); Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Adonis vernalis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: road of Ac.tat., Salv.-Fest. 1981).
Aegopodium podagraria L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Agrimonia eupatoria L. - Kerecsend (BP: SzL. in: road of Ac.tat. 1981, 1982).
Ajuga genevensis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.; (BP: SzL. in: Ac.tat., Marg. of Ac.tat. 1981); Kál 8287 (BP: THAISZ 1910).
A. (genevensis L. x reptans L.) hybrida Kern. - Kerecsend (BP: SzL. & RADICS in: Ac. tat.).
Ajuga laxmannii (L.) Benth. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Ajuga reptans L. - Verpelét "Dobi puszta" 8187 (BP: VRABÉLYI 1869).
Alliaria petiolata (M.B.) Cavara et Grande - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981-82).
Anagallis arvensis L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982).
Androsace elongata L. - Kálkápolna in fallow field 8287 (BP: BÁNÓ 1949-50).
Anemone ranunculoides L. - Kerecsend (BP: SzL. in: Ac.tat. 1982).
Anthriscus cerefolium (L.) Hoffm. ssp. trichosperma (Spr.) Arch. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
Anthriscus sylvestris (L.) Hoffm. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981-82).
var. glabrescens Schur - Kerecsend (BP: SzL. in: Robinietum 1981).
Arenaria procera Spr. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Aristolochia clematitis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Robinietum, edge of field 1981-82).
Artemisia pontica L. - Kápolna 8287 KITAIBEL in: KANITZ (1863); Kerecsend, ZÓLYOMI (1957) in: Ac.tat.; (BP: SzL. in: Marg. of Ac.tat.1981).
Aster sedifolius L. - between Verpelét 8187 and Véts 8766 KITAIBEL in: KANITZ (1863) in "Quercus forest", (BP: SADLER 1823).
Astragalus asper Wulf. et Jacq. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Astragalus glyciphyllos L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac. tat. 1981).
Atropa bella-donna L. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).

Ballota nigra L. - Kerecsend (BP: SzL. & PRISZTER in: Ac.tat., Frax-Ulm., Marg. of Ac.tat., Prun. 1981-82).
Betonica officinalis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road and Marg. of Ac.tat. 1981).
var. alba SzL. - Kerecsend (BP: SzL. in: Prun. 1981).
Campanula bonoiensis L. - Kerecsend (BP: SzL. in: Road of Ac. tat. 1981).
Campanula cervicaria L. - Kerecsend (BP: SzL. in: Road of Ac. tat., Def. 1981-82).
Campanula persicifolia L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Campanula rapunculoides L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Campanula rapunculus L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac. tat. 1981).
Capsella bursa-pastoris (L.) Medic. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Carpinus betulus L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Pol.-Carp., Ac.tat. 1981).
Centaurea cyanus L. - Kerecsend (BP: SzL. edge of field 1982).
Centaurea pannonica (Heuff.) Simk. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Centaurium erythraeae Rafn. - Kerecsend (BP: SzL. in: Road of Ac.tat., edge of Prun. 1981).
Cerastium fontanum Baumg. - Kerecsend (BP: SzL. & Radics in: Road of Ac.tat. 1981).
Cerasus fruticosa Pall. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat. 1981).
Chelidonium majus L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Cichorium intybus L. - Kerecsend (BP: SzL. in: edge of Prun. 1981).
Clematis integrifolia L. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981); Kál 8287 (BP: THAISZ 1910).
Clematis recta L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Clinopodium vulgare L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm., Marg. and Road of Ac.tat. 1981).
Consolida regalis S.F. Gray - Kerecsend (BP: SzL. in: edge of field 1982).
Convolvulus arvensis L. - Kerecsend (BP: SzL. in: Robinietum 1981).
Cornus mas L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Cornus sanguinea L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
var. hungarica Kárp. - Kerecsend (BP: SzL. in: Ac.tat. 1982).
Coronilla varia L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac. tat. 1982).
Corydalis cava (L.) Schw. et Körte - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Corylus avellana L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Marg. of Ac.tat.
Crataegus monogyna Jacq. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Ac.tat., Marg. of Ac.tat 1981).
Cruciata laevipens Opiz, Ehrend. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Road of Ac.tat., Frax.-Ulm. 1981-82).
Daucus carota L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Dianthus armeria L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Dianthus giganteiformis Borb. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Dictamnus albus L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Salv.-Fest. 1981).
Digitalis grandiflora Mill. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm. 1981).
Doronicum hungaricum (Sadl. in Griseb. et Sch.) Rchb. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Road and Marg. of Ac.tat. 1981).
Draba muralis L. - Kál-Kálkápolna 8287 (BP: BÁNO 1950).
Echium russicum J.F.Gmel. - Kápolna 8287, KITAIBEL in: KANITZ (1863); Kál 8287 (BP: THAISZ 1910).
Erophila verna (L.) Chevall. - Kerecsend (BP: SzL. in: Salv.-Fest. 1982).
Euonymus europaea L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat. (BP: SzL. in: Road of Ac.tat., Ac.tat., Frax.-Ulm. 1981-82).
Euonymus verrucosus Scop. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Frax.-Ulm. 1981).
Euphorbia amygdaloides L. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).

Euphorbia angulata Jacq. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Euphorbia cyperissias L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., K. & PRISZTER in: Road of Ac.tat., Salv.-Fest. 1981-83).
Euphorbia epithymoides L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Euphorbia salicifolia Host. - Kerecsend (BP: SzL. in: Road of Ac.tat., Def. 1981-82).
var. pubescens Grisebach - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Euphorbia virgata W. et K. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Fallopia dumetorum (L.) Holub - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm., Robinietum 1981).
Ficaria verna Huds. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Filago arvensis L. - Kerecsend (BP: SzL. in: Def. 1982).
Filipendula vulgaris Moench - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road and Marg. of Ac.tat., Salv.Fest. 1981-82).
Fragaria vesca L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat., (BP: SzL. & K. in: Road of Ac.tat., Salv.-Fest. 1981).
Fragaria viridis Duch. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat. 1982).
Frangula alnus Mill. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm. 1981).
Fraxinus angustifolia Vahl - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
ssp. pannonica SOÓ et SIMON - Kerecsend (BP: SzL. in: Frax.-Ulm. 1982).
Fraxinus excelsior L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Galeopsis ladanum L. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
Galeopsis tetrahit L. var. silvestris Schlechtd. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
Galium album Mill. ssp. erectum (H.Br.) Krendl - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Galium aparine L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat. (BP: SzL. in: Frax.-Ulm. 1981).
Galium glaucum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Salv.-Fest.1981).
Galium intermedium Schult. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat. 1982).
Galium mollugo L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
var. oligotrichum Borb. - Kerecsend (BP: SzL. & DOBOLYI in: Marg. of Ac.tat. 1981).
Galium verum L. - Kerecsend (BP: SzL. & RADICS in: Road and Marg. of Ac.tat., Salv.-Fest. 1981).
Genista elata (Moench) Wenderoth - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Geranium divaricatum Ehrh. - Kápolna 8287 (BP: BOROS 1948).
Geranium robertianum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm., Pol.-Carp. 1981-82).
Geranium sanguineum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. and Road of Ac.tat. 1981).
Geum urbanum L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat. (BP: SzL. in: Frax.-Ulm., Pol.-Carp. 1981).
Glechoma hederacea L. - Kerecsend (BP: SzL. in: Ac.tat., Road of Ac.tat., Pol.-Carp. 1981).
Glechoma hirsuta W. et K. - Kerecsend, ZÓLYOMI (1957), (BP: SzL., K. & PRISZTER 1982). in: Ac.tat.
Gratiola officinalis L. - Kál 8287 (BP: THAISZ 1910).
Gypsophyla muralis L. - Kerecsend (BP: SzL. in: edge of field, Marg. of Prun. 1981-82).
Gypsophyla paniculata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Hedera helix L. - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Helianthemum nummularium (L.) Mill. - Kerecsend (BP: SzL. & DOBOLYI in: Salv.-Fest. 1981).
Heracleum sphondylium L. s.l. sibiricum - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.-tat., Frax.-Ulm. 1981).
Hieracium bauhinii Schult. ex Bess. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Hypericum hirsutum L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Hypericum perforatum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat., (BP: SzL. & RADICS in: Road of Ac.tat., Salv.-Fest. 1981).
Hypochoeris maculata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac. tat., Salv.-Fest. 1981).

Inula britannica L. - Kerecsend (BP: SzL. in: Road of Ac. tat. 1981).
Inula germanica L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Inula hirta L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Marg. and Road of Ac.tat., Salv.-Fest. 1981).
Inula salicina L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat.1981).
ssp. denticulata Borb. (BP: SzL. in: Salv.-Fest., Marg. and Road of Ac.tat., Def.1981-82).
Knautia arvensis (L.) Coult. - Kerecsend (BP: SzL. & RADICS, in: Salv.-Fest. 1981).
Lactuca quercina L. - Kápolna 8287, KITAIBEL in: KANITZ (1863); Kerecsend (BP: SzL. & RADICS in: Ac.tat., Marg. of Ac.tat. 1981).
ssp. sagittata (W. et K.) Čelak - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Lamium album L. - Kerecsend (BP: SzL. in: Marg. of Robinietum 1981).
Lapsana communis L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. in: Ac.tat. 1981).
Lathyrus latifolius L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat., (BP: SzL. & DOBOLYI in: Road of Ac.tat. 1981).
Lathyrus niger (L.) Bernh. - Kerecsend, ZÓLYOMI (1957) in: Ac. tat., (BP: SzL. in: Marg. of Ac.tat., Ac.tat., Frax.-Ulm. 1981).
Lathyrus pannonicus (Jacq.) Garcke ssp. collinus (Ortman) Soó - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & K. in: Road of Ac.tat. 1981).
Lathyrus pratensis L. - Kerecsend (BP: SzL. edge of field 1981).
var. uliginosus Waisb. - Kerecsend, (BP: SzL. & RADICS in: Marg. of Ac.tat. 1981).
Lathyrus tuberosus L. - Kerecsend, (BP: SzL. in: edge of field 1982).
Lathyrus vernus (L.) Bernh. - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Lembotropis nigricans (L.) Griseb. - Kerecsend (BP: SzL. & RADICS in: Marg. of Ac.tat.1981).
Leontodon hispidus L. ssp. pseudoincanus (Hay.) Soó - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Leucanthemum vulgare Lam. - Kerecsend (BP: SzL., DOBOLYI & RADICS in: Ac.tat., Road of Ac.tat. 1981).
Lepidium campestre (L.) R.Br. - Kerecsend (BP: SzL. in: Robinietum 1981).
Ligustrum vulgare L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., DOBOLYI & K. in: Ac.tat., Marg. of Ac.tat., Frax.-Ulm., Pol.-Carp. 1981).
Linaria angustissima (Lois.) Borb. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Linaria vulgaris Mill. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Linum perenne L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Lithospermum arvense L. - Kerecsend (BP: SzL. in: Marg. and Road of Ac.tat. 1981).
Lithospermum officinale L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Lithospermum purpureocoeruleum L. - Kerecsend, ZÓLYOMI (1957), in: Ac.tat. (BP: SzL. & PRISZTER in: Ac.tat., Marg. and Road of Ac.tat., Frax.-Ulm. 1981-82).
Loranthus europaeus L. - Kápolna 8287, KITAIBEL in: KANITZ (1863).
Lotus angustissimus L. - Kerecsend (BP: SzL. in: Marg. of Prun. 1981).
Lotus corniculatus L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
var. ciliatus Koch - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Lychnis coronaria (L.) Desr. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Lychnis flos-cuculi L. - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat., Frax.-Ulm. 1981).
Lychnis viscaria L. - Kerecsend (BP: SzL. & DOBOLYI in: Salv.-Fest., Road of Ac.tat. 1981).
Lysimachia nummularia L. - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Malus sylvestris (L.) Mill. - Kerecsend, ZÓLYOMI (1957), (BP: SzL., K. & PRISZTER 1981-82) in: Ac.tat.
Medicago falcata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Medicago lupulina L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981); Kál 8287, (BP: THAISZ 1910).
Melampyrum arvense L. - Kerecsend (BP: SzL. in: Def. 1982).
Melampyrum barbatum W. et K. Verpelét 8187, KITAIBEL in: KANITZ (1863).
Melampyrum cristatum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Salv.-Fest. 1981).
Melittis melissophyllum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).

Moehringia trinervia (L.) Clairv. - Kerecsend (BP: SzL., K. & PRISZTER in: Ac.tat., Frax.-Ulm. 1981-82).
Mycelis muralis (L.) Dum. - Kerecsend (BP: SzL. & DOBOLYI in: Ac.tat. 1981).
Myosotis arvensis (L.) Mill. - Kerecsend (BP: SzL., K. & PRISZTER in: Road of Ac.tat.1981-82).
Myosotis sparsiflora Mikan ex Pohl - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm., Robinietum 1981-82).
Myosurus minimus L. - Kálkápolna 8287 (BP: BÁNÓ 1948).
Nepeta pannonica L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat.1981).
Oenanthe silaifolia M.B. - Kál 8287 (BP: THAISZ 1910).
Origanum vulgare L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. and Road of Ac. tat. 1981).
Padus avium Mill. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Peucedanum alsaticum L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac. tat., Salv.-Fest. 1981).
Peucedanum cervaria (L.) Cuss. in Lap. - Kerecsend, ZÓLYOMI (1957), in: Ac.tat. (BP: SzL.in: Road of Ac.tat., Salv.-Fest. 1981).
Peucedanum officinale L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat. 1981); between Verpelét 8187 and Döbrő = Aldebrő 8287, KITAIBEL in: KANITZ (1863) (BP: SADLER 1818); between Verpelét 8187 and Véts 8186 (BP: SADLER in: "Quercus forest" 1918).
Phlomis tuberosa L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Salv.-Fest. 1981).
Picris hieracioides L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Plantago lanceolata L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
var. sphaerostachya (M. et K.) Hay. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Plantago media L. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
var. urvilleana Rapin. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Podospermum canum C.A.Mey. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Polygala comosa Schkuhr - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Potentilla alba L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Potentilla argentea L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Road of Ac.tat., Salv.-Fest. 1981).
Potentilla heptaphylla Jusl. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
var. glutinosa Schur - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Prunella laciniata (L.) Nath. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Prunella vulgaris L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Prunus spinosa L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Frax.-Ulm., Prun. 1981-82).
f. inermis Tinant - Kerecsend (BP: SzL. & RADICS in: Marg. of Ac.tat. 1981).
Prunus tenella Batsch. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Pulmonaria heinrichii Salv. (P. mollis x P. angustifolia) - Kerecsend (BP: SzL.& RADICS in:Road of Ac.tat. 1981).
Pulmonaria mollis Wolff ex Hornem. ssp. mollissima (Kern.) Nym. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat. (BP: SzL. in: Marg. and Road of Ac.tat. 1981).
Pyrus pyraster Burgsd. Medik - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Quercus cerris L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Marg. of Ac. tat. 1981).
var. austriaca (Willd.) Loud. - Kerecsend (BP: SzL. in: Ac.tat., Marg. of Ac.tat., Frax.-Ulm. 1981).
var. cerris Mátyás - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Quercus dalecamphii Ten. var. pinnatifida (Boiss.) O. Schwarz - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Quercus hybrida - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Quercus petraea (Mattuschka) Lieblein - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Pol.-Carp. 1981).
var. laciniata (Lam.) O. Schwarz - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
var. longifolia (Dippel) O. Schwarz - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Quercus soói Mátyás (Q. petraea x Q. pubescens) - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Quercus pubescens Willd. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.

Quercus robur L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Frax.-Ulm. 1981).
Ranunculus auricomus L. em. Korsh. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Ranunculus pedatus W. et K. - Kerecsend (BP: SzL., K.&PRISZTER in: Road of Ac.tat. 1981-82).
Ranunculus polyanthemos L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac. tat., Salv.-Fest. 1981).
Ranunculus sardous Cr. - Kál 8287 (BP: THAISZ 1910).
Rhamnus catharticus L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm.1981).
Ribes sp. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Rorippa sylvestris (L.) Bess. - Kál 8287 (BP: THAISZ 1910).
Rosa agrestis Savi - Kerecsend (BP: FACSAR in: Marg. of Ac.tat. 1971-80).
Rosa caesia SM. ex Sow. - Kerecsend (BP: FACSAR in: Marg. of Ac.tat. 1971-80).
Rosa canina L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
var. durnalis Baker - Kerecsend (BP: SzL.& FACSAR in: Road of Ac.tat. 1981).
Rosa caryophyllacea Bess. var. zalana (Wiesb.) Borb. - Kerecsend (BP: FACSAR in: Marg. of Ac. tat. 1971-80).
Rosa corymbifera Borkh. - Kerecsend (BP: FACSAR in: Marg. of Ac.tat. 1971-80).
var. heterotricha Borkh. - Kerecsend (BP: SzL.& FACSAR in: Marg. of Ac.tat. 1981).
Rosa elliptica Tausch - Kerecsend (BP: FACSAR in: Marg. of Ac.tat. 1971-80).
Rosa gallica L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat. 1981).
var. stenotricha (Borb.) Deg. - Kerecsend (BP: SzL.& FACSAR in: Marg. of Ac.tat. 1981).
Rosa micrantha Borrer ex Sm. in Sow. - Kerecsend (BP: FACSAR in: Marg. of Ac.tat. 1971-80).
Rubus idaeus L. - Kerecsend (BP: SzL.& DOBOLYI in: Marg. of Ac.tat. 1981).
Rumex acetosa L. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Rumex acetosella L. - Kerecsend (BP: SzL. in: Road of Quercetum cult. 1981).
Rumex crispus L. - Kál 8287 (BP: THAISZ 1910).
Salvia nutans L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Salvia pratensis L. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Scabiosa ochroleuca L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Scleranthus annuus L. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1982).
Scrophularia nodosa L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. K. in: Ac.tat., Frax.-Ulm., Def. 1981-82).
Sedum maximum (L.) Hoffm. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. K. in: Ac. tat., Marg. of Ac.tat. 1981).
Serratula tinctoria L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Pol.-Carp. 1981).
var. dissecta Wahl. - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Seseli pallasii Bess. - Kerecsend (BP: SzL. in: Marg. of Ac.tat., Salv.-Fest. 1981).
Silene nutans L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL.& DOBOLYI, Road of Ac. tat., Salv.-Fest. 1981).
Silene viscosa (L.) Pers. - Kál 8287 (BP: THAISZ 1910).
Silene vulgaris (Moench) Garcke - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat. 1981).
var. latifolia (Mill.) Beck - Kerecsend (BP: SzL.& DOBOLYI in: Road of Ac.tat. 1981).
Solidago virgaurea L. - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Stachys annua L. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Stachys recta L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. and Road of Ac. tat., Salv.-Fest. 1981).
Stachys sylvatica L. - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Staphylea pinnata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac. tat. 1981).
Stellaria graminea L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Stenactis annua (L.) Nees - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
Symphitum officinale L. - Kál 8287 (BP: THAISZ 1910); Verpelét 8187, KITAIBEL in: KANITZ (1863).
var. ochroleucum Dc. - Kál 8287 (BP: THAISZ 1910); between Kál 8287 and Vécs 8186, beside "Tarnóca patak" (BP: JÁVORKA, CSAPODY & PAPP 1961).
Symphitum tuberosum L. ssp. nodosum (Schur) Soó - Kerecsend, ZÓLYOMI (1957), (BP: SzL.1980) in: Ac.tat.

f. pseudobulbosum Gáy - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Tanacetum corymbosum (L.) C.H. Schultz - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Ac.tat., Marg. and Road of Ac.tat. 1981).
Tanacetum vulgare (L.) Bernh. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Taraxacum laevigatum (Willd.) D.C. - Kerecsend (BP: SzL., K. & PRISZTER in: Road of Ac.tat. 1982).
Teucrium chamaedrys L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & K. in: Marg. and Road of Ac.tat., Salv.-Fest. 1981).
var. illyricum Borb. et Borum. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Thalictrum lucidum L. var. angustissimum Cr. - Kál 8287 (BP: THAISZ 1910).
var. peucedanifolium (Gr. et Sch.) Hay. - near Kál 8287, beside "Tarnóca patak" (BP: JÁVORKA, CSAPODY & PAPP 1961).
Thalictrum minus L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat. 1981).
Thalictrum simplex L. - Kerecsend (BP: SzL. & DOBOLYI in: Marg. and Road of Ac.tat. 1981).
Thesium linophyllon L. - Kerecsend (BP: SzL. & DOBOLYI in: Salv.-Fest. 1981).
Thlaspi arvense L. - Kál-Kálkápolna 8287, beside "Tarnóca patak" in cultivated field (BP: CSAPODY 1950).
Thlaspi jankee Kern. - Kál-Kálkápolna 8287 (BP: BÁNÓ 1948); Kerecsend (BP: SzL. & K. in: Road of Ac.tat. 1981).
Thymus sp. - Kál 8287 (BP: THAISZ 1910).
Thymus pulegioides L. ssp. parviflorus (Opiz) Machules - Kerecsend (BP: SzL. in: Road of Ac. tat., Salv.-Fest. 1981).
Tilia sp. - Erdőtelek 8387 (BP: PAPP 1950).
Tilia cordata Mill. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Tilia platyphyllos Scop. - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Torilis arvensis (Huds.) Link. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Torilis japonica (Houtt) DC. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac. tat., Frax.-Ulm. 1981).
Tragopogon orientalis L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982).
Trifolium alpestre L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., RADICS & DOBOLYI in: Salv.-Fest. 1981).
Trifolium arvense L. - Kerecsend (BP: SzL. in: Marg. of Prun. 1982).
Trifolium campestre Schreb. in Sturm - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat., Def., Salv.-Fest. 1981-82).
var. minus Koch - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982).
Trifolium medium Grufbg. in L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.; between Verpelét and Vécs 8766, KITAIBEL in: KANITZ (1863).
Trifolium montanum L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981-82).
Trifolium pratense L. - Kál 8287 (BP: THAISZ 1910).
Trifolium rubens L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982) between Verpelét and Vécs 8187, KITAIBEL in: KANITZ (1863).
Trifolium striatum L. var. kitaibelianum (Ser.) Heuff. - Kál 8287 (BP: THAISZ 1910).
Turritis glabra L. - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Ulmus glabra Huds. - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Ulmus minor Mill. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Ac. tat., Frax.-Ulm. 1981).
Valeriana officinalis L. - Kerecsend (BP: SzL. in: Ac.tat., Pol.-Carp. 1981).
var. altissima (Hornem.) Koch - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Verbascum austriacum Schott - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Verbascum lychnitis L. - Kerecsend (BP: SzL. in: Marg. of Ac. tat. 1982).
Verbascum phoeniceum L. - Kál 8287 (BP: THAISZ 1910); Kerecsend (BP: SzL. in: Road of Ac. tat. 1981).
Veronica arvensis L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1981).
Veronica austriaca L. ssp austriaca (Schmidt) Watzl. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Veronica chamaedrys L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., RADICS, K. & Priszter in: Ac.tat., Road of Ac.tat. 1981-82).
Veronica hederifolia L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Frax.-Ulm., Pol.-

Carp. 1981).
ssp. triloba (Opiz.) Čelak. - Kerecsend (BP: SzL. & RADICS in: Ac.tat., Frax.-Ulm. 1981).
Veronica officinalis L. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982).
Veronica orchidea Cr. - Kerecsend (BP: SzL. in: Road of Ac.tat., Def. 1981-82).
Veronica paniculata L. ssp. foliosa - Verpelét 8187, Vécs 8186, KITAIBEL in KANITZ (1863).
Veronica persica Poir. - Kálkápolna 8287 "forester hill" (BP: BÁNÓ 1948).
Veronica prostrata L. - Kerecsend (BP: SzL., K. & PRISZTER in: Road of Ac.tat. 1982).
Veronica spicata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Road of Ac.tat., Salv.-Fest. 1981).
var. hybrida (L.) Wallr. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Veronica spuria L. ssp. foliosa (W. et K.) Harle - between Verpelét 8187 and Véts (Vécs) 8186 in "Quercus forest" (BP: Sadler 1918); Kerecsend, ZÓLYOMI (1957) in: Ac. tat.
Veronica teucrium L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
ssp. pseudochamaedrys (Jacq.) Nymm. (BP: SzL. & RADICS in: Salv.-Fest. 1981).
Viburnum lantana L. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Vicia cassubica L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Road and Marg. of Ac.tat. 1981).
Vicia cracca L. - Kál 8287 (BP: JÁVORKA & CSAPODY 1961); Kerecsend (BP: SzL. in: Marg. and Road of Ac.tat. 1981).
ssp. tenuifolia (Roth) Gaud. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Salv.-Fest. 1981).
Vicia pisiformis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. and Road of Ac.tat. 1981).
Vicia tenuifolia Roth - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Vicia tetrasperma (L.) Schreb. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Vinca herbacea W. et K. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac. tat. 1981).
Vince minor L. - Kerecsend (BP: SzL. in: Ac.tat., Road of Ac.tat. 1981).
Vincetoxicum hirundinaria Medik. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac. tat., Marg. of Ac.tat., Salv.-Fest. 1981).
Viola ambigua W. et K. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1982).
Viola cyanea Čelak - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Viola hirta L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Road of Ac.tat., Frax.-Ulm., Salv.-Fest. 1981-82).
Viola mirabilis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Viola odorata L. - Kerecsend (BP: SzL., H.-H., OBERCZIÁN-TELEK, RADICS & PRISZTER in: Ac.tat., Marg. of Ac.tat., Frax.-Ulm. 1981-82).
Viola suavis M.B. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Viola sylvestris Lam. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.,(BP: SzL., K. & PRISZTER in: Ac.tat., Frax.-Ulm. 1981-82).
Xeranthemum annuum L. - Vécs 8186, KITAIBEL in: KANITZ (1863).

Monocotyledones

Agropyron caninum (L.) P.B. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Ac.tat., Frax.-Ulm. 1981-82).
Agropyron intermedium (Host) P.B. ssp. trichophorum (Link) Soó - Kerecsend (BP: SzL. in:Salv.-Fest. 1981).
Agrostis stolonifera L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Marg. of Prun., edge of field 1981).
Agrostis murbeckii Fouillade (A. stolonifera x tenuis) - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Agrostis capillaris L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Marg. of Prun. 1981).
Allium angulosum L. - Verpelét 8187, KITAIBEL in: KANITZ (1863).
Allium sativum L. - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Allium scorodoprasum L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Marg. of Prun. 1981).
Allium vineale L. - between Vécs 8186 and Kál 8287 beside riv. "Tarnóca patak" (BP: JÁVORKA, CSAPODY & PAPP 1961).

Alopecurus pratensis L. - Kerecsend (BP: SzL., K. & JANKÓ in: Road of Ac.tat. 1981).
Anthoxanthum odoratum L. - Kerecsend (BP: SzL. in: Road of Ac. tat. 1981).
Arrhenatherum elatius (L.) J. et C. Presl var. biaristatum Peterm. - Kerecsend (BP: SzL. & RADICS in: Road of Ac. tat. 1981).
Asparagus officinalis L. var. pseudotenuifolius Polgár - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Avenula pubescens (Darré) Dum. - Kerecsend (BP: SzL. in: Road of Ac.tat., Marg. of Frax.-Ulm. 1981).
Brachypodium pinnatum (L.) P.B. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Marg. of Ac.tat., Salv.-Fest. 1981).
Brachypodium silvaticum (Huds) R. et Sch. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981-82).
Briza media L. - Kerecsend (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).
Bromus commutatus Schrad. - Kerecsend (BP: SzL. in: edge of field, near forest 1981).
Bromus inermis Leyss. - Kerecsend (BP: SzL. & DOBOLYI in: Road of Ac.tat., Salv.-Fest. 1981).
Bromus ramosus Huds. ssp. benekenii (Lange) Sch. et Thell. - Kerecsend, ZÓLYOMI (1957), (BP: SzL. 1981) in: Ac.tat.
Bromus secalinus L. var. hybridus Schur. - Kál 8287 (BP: THAISZ 1910).
Calamagrostis arundinacea (L.) Roth - Kerecsend (BP: SzL. in: Marg. and Road of Ac.tat.1981-82).
Carex caryophyllea Latour. - Kerecsend (BP: SzL. in: Salv.-Fest. 1981).
Carex michelii Host - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Carex montana L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., K. & PRISZTER in: Road of Ac.tat. 1981-82).
Carex pairae F. Schultz. ssp. leersii (F.Schultz.) Jáv. - Kerecsend (BP: SzL. & DOBOLYI in: Ac. tat., Frax.-Ulm. 1981).
Carex pilosa Scop. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Carex praecox Schreb. - Kálkápolna 8287, "edge of road" (BP: BÁNÓ 1948).
Carex spicata Huds. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., K. & PRISZTER in: Road of Ac.tat. 1982).
Cephalanthera damasonium (Mill.) Druce - Kerecsend (BP: SzL. in: Pol.-Carp. 1981).
Chrysopogon gryllus (Torn. et L.) Trin. - Kerecsend (BP: SzL. in: Marg. of Ac.tat. 1981).
Convallaria majalis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & K. in: Ac.tat., Frax.-Ulm. 1981).
Dactylis glomerata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. var. ciliata Peterm. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1981).
Dactylis polygama Horvátovszky - Kerecsend (BP: SzL., K. & RADICS in: Ac.tat., Frax.-Ulm. 1981).
Eleocharis palustris (L.) R. et Sch. and ssp. mamillata (Lindb.) Beauv. - Kál 8287 (BP: THAISZ 1910).
Epipactis helleborine Cr. - Kerecsend (BP: SzL. in: Ac. tat. 1981).
Festuca heterophylla Lam. - Kerecsend (BP: SzL. & RADICS in: Ac.tat., Road of Ac.tat. 1981).
Festuca pseudodalmatica Kraj. ex Dom. - Kerecsend (BP: SzL. & RADICS in: Salv.-Fest. 1981).
Festuca rupicola Heuff. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Salv.-Fest.1981).
Festuca valesiaca Schleich. ex Gaud. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., K. & PRISZTER in: Road of Ac.tat., Salv.-Fest. 1981-82).
Gagea minima (L.) Ker.-Gawl. - Kerecsend (BP: SzL. in: Frax.-Ulm. 1982).
Gagea pratensis (Pers.) Dum. - Kerecsend (BP: SzL., K., H.-H. & OBERCZIÁN-TELEK in: Ac. tat., Road and Marg. of Ac.tat. 1981-82); Kálkápolna 8287 in: "forest hill" (BP: BÁNÓ 1948).
f. ciliata (Beck) Soó - (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Gagea villosa (M.B.) Duby - Kálkápolna 8287 in: field (BP: BÁNÓ 1948).
Glyceria maxima (Hartm.) Holmberg - Kápolna 8287, KITAIBEL in: KANITZ (1863).
Hordeum geniculatum All. - Vécs 8186, KITAIBEL in: KANITZ (1863).
Iris graminea L. ssp. pseudocyperus (Schur.) Jáv. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL., K. in: Road of Ac.tat. 1981-82).
Iris variegata L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & DOBOLYI in: Marg.and Road of Ac.tat., Salv.-Fest. 1981).
Koeleria cristata (L.) Pers. em. Borb. et Dom. - Kerecsend (BP: SzL. & K. in: Salv.-Fest. 1981).

Koeleria glauca (Schkuhr) DC. - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Luzula campestris (L.) Lam. et DC. - Kerecsend (BP: SzL. in: Marg. of Salv.-Fest. 1981).
Luzula luzuloides (Lam.) Dandy et Wilmott - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Melica altissima L. - Kápolna 8287, KITAIBEL in: KANITZ (1863) Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Melica picta C. Koch - Kerecsend, ZÓLYOMI (1957) in: Ac.tat.
Melica transsilvanica Schur. - Kerecsend (BP: SzL. in: Def. 1982).
Melica uniflora Retz - Kerecsend (BP: SzL. in: Ac.tat., Frax.-Ulm. 1981).
Muscari botryoides (L.) Mill. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Road of Ac.tat., Pol.-Carp. 1981-82).
ssp. hungaricum Priszter - Kerecsend (BP: SzL., K. & PRISZTER in: Marg. and Road of Ac.tat. 1982).
Muscari botryoides (L.) Mill. x M. tenuiflorum Tausch. - Kerecsend (BP: SzL. & RADICS in: Road of Ac.tat. 1981).
Muscari comosum (L.) Mill. - Kerecsend (BP: SzL. in: Marg. of Prun. 1982).
Muscari racemosum (L.) Mill. - Kálkápolna 8287 in: "field" (BP: BÁNÓ 1950).
Muscari tenuiflorum Tausch. - Kerecsend (BP: SzL. in: Road of Ac.tat. 1982).
Ornitogalum gussonei Ten. - Kerecsend (BP: SzL., K. & PRISZTER in: Ac.tat., Marg. of Ac. tat. 1981-82).
Ornitogalum pyramidale L. - Kál 8287 beside "Tarnóca patak" (BP: JÁVORKA & CSAPODY 1961).
Phleum phleoides (L.) Karsten. - Kerecsend (BP: SzL., DOBOLYI & RADICS in: Road of Ac.tat., Salv.-Fest. 1981-82).
Phleum pratense L. ssp. nodosum (L.) Arc. - Kerecsend (BP: SzL. in: edge of field 1981).
Platanthera bifolia (L.) Rchb. - Kerecsend (BP: SzL. in: Ac.tat. 1981).
Poa angustifolia L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Salv.-Fest., Marg. of Prun. 1981).
Poa compressa L. - Kerecsend (BP: SzL. & RADICS in: Marg. of Ac.tat. 1981).
Poa nemoralis L. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Ac.tat., Frax.-Ulm., Pol.-Carp., Robinietum 1981).
Polygonatum latifolium (Jacq.) Desf. - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. & RADICS in: Ac.tat., Marg. of Ac.tat., Frax.-Ulm., Pol.-Carp. 1981).
Polygonatum odoratum (Mill.) Druce - Kerecsend, ZÓLYOMI (1957) in: Ac.tat. (BP: SzL. in: Road of Ac.tat., Salv.-Fest. 1981).

Key to the occurrence of the taxa according to the finest differences among the microhabitats: 1 = Ac.tat.; 2 = Marg. of Ac.tat.; 3 = Road of Ac.tat.; 4 = Ac.tat. + Marg. of Ac.tat.; 5 = Ac.tat. + Road of Ac.tat.; 6 = Marg. of Ac.tat. + Road of Ac.tat.; 7 = Ac.tat. + Marg. of Ac.tat. + Road of Ac.tat.; 8 = Ac.tat. + Frax.-Ulm.; 9 = Ac.tat. + Salv.-Fest.; 10 = Ac.tat. + Pol.-Carp.; 11 = Salv.-Fest. + Road of Ac.tat.; 12 = Ac.tat. + Road of Ac.tat. + Salv.-Fest.; 13 = Marg. of Ac.tat. + Salv.-Fest. + Road of Ac.tat.; 14 = Marg. of Ac.tat. + Frax.-Ulm. + Road of Ac.tat.; 15 = Ac.tat. + Frax.-Ulm. + Road of Ac.tat.; 16 = Ac.tat. + Frax.-Ulm. + Marg. of Ac.tat.; 17 = Ac.tat. + Pol.-Carp. + Road of Ac.tat.; 18 = Ac.tat. + Marg. of Ac.tat. + Pol.-Carp.; 19 = Ac.tat. + Marg. of Ac.tat. + Salv.-Fest. + Road of Ac.tat.; 20 = Ac.tat. + Marg. of Ac.tat. + Salv.-Fest.; 21 = Ac.tat. + Pol.-Carp. + Frax.-Ulm.; 22 = Ac.tat. + Pol.-Carp. + Marg. of Ac.tat. + Frax.-Ulm.; 23 = Ac.tat. + Frax.-Ulm. + Robinietum; 24 = Marg. of Prun.; 25 = edge of Prun.; 26 = Salv.-Fest.; 27 = Frax.-Ulm.; 28 = Pol.-Carp.; 29 = Robinietum; 30 = edge of field; 31 = Def.; 32 = others (single case).

Type of the plant geographical area: 1 = Eurasian; 2 = Eurasian (Mediterranean, sub-Mediterranean); 3 = Eurasian (European-Siberian); 4 = Eurasian-Continental; 5 = South-Central Eurasian (Mediterranean); 6 = European; 7 = European-Asia Minor (Mediterranean); 8 = European (Mediterranean); 9 = European-Siberian, (Mediterranean); 10 = European, sub-Mediterranean (Continental); 11 = European-West Asian; 12 = Central European; 13 = Central European (Balkanian); 14 = Central European (Mediterranean); 15 = East-Central European (sub-Mediterranean); 16 = South-Central European-Pontian-sub-Mediterranean; 17 = South-East European-Central-Asian; 18 = Southeast-Central European-Pontian; 19 = Atlantic-Mediterranean (Central-European); 20 = sub-Mediterranean; 21 = sub-Mediterranean (Central-European); 22 = Southern sub-Mediterranean (Balkanian-Pannonian); 23 = Pannonian-Balkanian; 24 = Ponto-Mediterranean; 25 = Ponto-Pannoni-

an; 26 = Ponto-Pannonian Balkanian; 27 = Circumpolar; 28 = Circumpolar (Mediterranean); 29 = Cosmopolitan; 30 = Others; only one species each belong to the following type of area: North-Central European; Mediterranean-Asia Minor; Mediterranean-Cosmopolitan; Pannonian endemic; Pontian; Ponto-sub-Mediterranean; Ponto-Mediterranean-Central European; Ponto-Pannonian-Caucasian; Ponto-South-East European; Amfiatlantic; Circumpolar-Cosmopolitan; Continental.

Table 1. Occurrence of the taxa in varions microhabitats

No. of area type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Number of taxa	58	28	50	13	18	6	8	23	5	3	13	11	1	1	4	7	249

No. of area type	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	Total
Number of taxa	2	2	6	3	3	2	2	3	2	21	11	6	3	6	3	25	100
																Grand Total =	349

Abbreviations: N = number of taxa; S = number of habitat categories
N = 349; S = 32; H'= 4.2059; J = 0.8411

Table 2. Distribution of the taxa according to area type

No. of area type	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Number of taxa	43	86	5	10	8	21	2	19	5	2	2	19	2	12	3	239

No. of area type	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Number of taxa	5	9	3	4	3	13	6	2	5	7	2	11	7	7	13	97
															Grand Total =	336

Abbreviations: N = Number of taxa; S = Number of areal type
N = 336; S = 30; H'= 4.0534; J = 0.8260

Table 3. Life-form

M	N	Ch	G	H	TH	Th	Total
MM-M	N-M	Ch-N	G(-Ch)	H-G	TH-H(G)	Th-TH	
M-MM		Ch-H	G-H	H(-G)	TH, Th, H	Th-TH-H	
E-M			G(H)	H(G)	TH-H	Th(TH, H)	
			G(-HH)	H-Ch	TH(-H)	Th-H	
				H(Ch)		Th(TH)	
				H(TH)		Th(-TH)	
				H(Ch-G)		Th-TH-H-Ch	
44	2	10	31	195	11	49	342

Abbreviations: N = Number of taxa; S = Number of life-form categories
N = 342; S = 7; H'= 2.5891; J = 0.9222

DISCUSSION

The check-list contain 348 taxa altogether of the plants Kerecsendi berek forest, including those of a forest and area in its vicinity. Moreover, I have also taken in to account old herbarial data from BP.

ZÓLYOMI (1957) published 118 taxa based on the analysis of the Aceri tatarico-Quercetum community, but he noted that there was a fragment of the Fraxino pannonici-Ulmetum assotiation too. However, ZÓLYOMI's publication did not separately the species belonging to the latter community.

I have not found twenty-two species mentioned by ZÓLYOMI (l.c.) Some of these were mentioned here in a wider sense in time the data of KITAIBELs records form the end of the 18th and the beginning of the 19th century were also included.

However, positive differences (230 taxa) were found which are connected with the larger size of the study area, and the greater number of visits to Kerecsend. The number of species was also increased by the identification of the Quercus and Rosa taxa by specialist incorporating the most up-to-date of taxonomy.

The answer to our first question is a positive one. The Kerecsendi berek forest has been successfully protected up-today.

The refinement of the scale of the microhabitat where the varions taxa occur resulted in the possibility of counting the species which occur only in one (in any) community. Moreover, the coenological of those species which occur in more than one microhabitats can be ascertained(Table 1).

According to this rigorous record of the occurrence of the taxa, 58 species grow only in the Aceri tatarico-Quercetum, 50 species were found only in varions roads of Aceri tatarico-Quercetum, the Polygonato (latifoliae)-Carpinetum has 6, the Salvio (nutanti-nemorosae)-Festucetum 21, and 11 taxa grow only in the Fraxino pannonicae-Ulmetum community.

There are 23 in common species between the Aceri tatrico-Quercetum and the Fraxino pannonicae-Ulmetum; 13 taxa in common Salvio (nutanti-nemorosae)-Festucetum and the roads in Aceri tatarico-Quercetum, but only five are in common between Aceri tatarico-Quercetum and Salvio (nutanti-nemorosae)-Festucetum. The other combinations of the microhabitats and taxa number resulted low values (Table 1).

Naturally, increasing the number of microhabitats in a group decreases the number of participating taxa. Those combinations in which only one species was in common are summarized as "others" (Table 1). But in the other hand these species have the greatest coenological valency in this region and they show less fidelity to any microhabitat or community.

Immigration of plants to this locality took place from the Eurasian Mediterranean, sub-Mediterranean (86 taxa); Eurasian (43 taxa); European (21 taxa); European (Mediterranean) and Central European (19-19 taxa); sub-Mediterranean (Central-European) (13 taxa); Central European (Mediterranean (12 taxa); Circumpolar (11 taxa); Eurasian-Continental (10 taxa) area. Species belonging to the other floral elements are less frequent (Table 2).

Entering the Kerecsendi berek forest the white and rose coloured flowers of the Central-European Corydalis cava appear in mass in the spring aspect in the Aceri tatarico-Quercetum, in the Fraxino pannonicae-Ulmetum and in the Polygonato (latifoliae)-Carpinetum forests.

The Aceri tatarico-Quercetum was characterised by ZÓLYOMI (l.c.) from coenologicaly point of view. Some new characteristic features may be given considering the flora-element composition of the investigated area. Such species are, e.g., the East-Mediterranean-Balkanian Quercus dalechampii var. pinnatifida, the South-East European Doronicum hungaricum, S-E European (Pannonian-Balkanian) Euphorbia epithymoides, the Eurasian-Continental Viola sauvis (ZÓLYOMI!), the Ponto-Mediterranean Ornithogalum gussonei, the Eurasian Platanthera bifolia.

In the margin of the Aceri tatarico-Quercetum grow the Central European (Mediterranean) Dictamnus albus, the Eurasian-Continentale Pulmonaria mollis ssp. mollissima, the Ponto-Pannonian (Caucasian) Rosa caryophyllacea, the Central-European (sub-Mediterranean) Rosa elliptica, R. gallica, R. micrantha, the Ponto-Pannonian (Balkanian) Iris variegata and the Eurasian-Continental Clematis integrifolia floral elements.

Only in the roads of the Aceri tatarico-Quercetum occur the Eurasian Nepeta pannonica, the Central European (Mediterranean) Peucedanum officinale, the Eurasian (Continental) Ranunculus pedatus, the Pannonian endemic Thlaspi jankae, the Pontian-Southeast European Veronica orchidea, the Ponto-Pannonian Vinca herbacea, the Ponto-sub-Mediterranean Iris graminea ssp. pseudocyperus, the South East European-Central Asian Muscari tenuiflorum.

In the wider part of the main road of the Aceri tatarico-Quercetum exists a steppe spot (cf. SZUJKÓ-LACZA & RAJCZY l.c.). Here occur the Pannonian-Balkanian Dianthus giganteiformis, the Collin- Montane Festuca pseudodalmatica, the Eurasian Festuca rupicola, the Ponto-Mediterranean -Central European Galium glaucum, the Ponto-Pannonian Salvia nutans (ZÓLYOMI!), the European-Siberian Melampyrum cristatum, the Eurasian Phlomis tuberosa, the sub-Mediterranean (Balkanian-Pannonian) Seseli pallassii, the Ponto-Mediterranean Stachys recta, the Central-South-east European Veronica austraiaca ssp. austriaca.

In the Fraxino pannonicae-Ulmetum community occur interest species such as the South-East European Fraxinus angustifolia, the Eurasian (Mediterranean) Veronica hedrifolia ssp. triloba, the Continental Gagea minima.

The Polygonato (latifoliae)-Carpinetum are fragmentarily represented here and the Central-European Mediterranean Tilia platyphyllos and the Cephalanthera damasonium lend unique character to it according to floral elements.

There are present 41 different flora elements (= type of plant geographical area).

It is the wealth of these elements that the flora and vegetation of Kerecsendi berek forest are of such scientific interest.

Beside this, conspicuous is the extremley high number of woody species in the tree and shrub layers belonging to the life-form categories MM-, M- and N (Table 3). The geophytes also play an important role here including four (five) taxa from Muscari and the very frequent Corydalis cava. Relatively high is the number of therophyton species and transient froms of these (Table 3).

The diversity of the species according to microhabitat, life-form and plant geographical areal type is higher in microhabitats and less in life-form (though the number of categories are different!). On the contrary, evenness value (J) is higher in life-form and less in floral element Table 4).

Table 4. Results of the flora analysis according to microhabitats, life-forms and the type of floral elements, e.g. the areal type

Microhabitat	Life-form	Areal type
H' = 4.2059	H' = 2.5891	H' = 4.0534
J = 0.8411	J = 0.9222	J = 0.8260
N = 349	N = 342	N = 336
S = 32	S = 7	S = 30

Out of the species present there are 37 % polyploid species, 2-3 % unidentified and 60 % diploid.

SUMMARY

The Kerecsendi berek forest and area in its vicinity is rich in vascular plant taxa, luxuriant in woody species belonging to the MM-M to the N types of life-forms in the trees- and shub layers, e.g. Acer and Quercus taxa, three of the Cornus including C. sanguinea ssp. hungarica ect.

The trees and shrubs were removed from the roads of the Kerecsendi berek forest over four hundred years ago. Since this time these roads have been "open" for the introduction of steppe and forest-steppe species which had previously grown near to the forest.

In the Salvio-Festucetum, the roads and at the margin of the Aceri tatarico-Quercetum 99 species occur out of the 342 taxa (Table 1).

Consequently, the variation and combination of the various floral elements are the greatest in these three microhabitats.

The nitrophilous species grouped mainly in the Fraxino pannonicae-Ulmetum, some of there are weed taxa.

But the truly ruderal composition is characteristic for the planted Robinetum part of the forest.

Polygonato (latifoliae)-Carpinetum is in a deep valley where the herb layer is overshaded. Minimal number of the occurring species in this community may be connected with its fragmentary size and the poorly illuminated environmental condition.

Aceri tatarico-Quercetum has greater number of "unique" than Salvio-Festucetum (Table 1).

Similarity is relative high between the Aceri tatarico-Quercetum and Fraxino pannonicae-Ulmetum in the common species.

Polygonato (latifoliae)-Carpinetum is represented by a fragmentary stand and the number of taxa, growing only in this community is six only.

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REFERENCES

BORBÁS, V. (1900): A Balaton tavának és partmellékének növényföldrajza és edényes növényzete. (Plant geography and the vascular plants of the Lake Balaton and in its coastal region). - In: A Balaton tudományos tanulmányozásának eredményei. (In: Results of the scientific studies of the Lake Balaton). Kilián F. Kiadó, Budapest, 431 pp.

BOROS, Á. (1935): A Mezőföld növényföldrajzi vázlata. (Plant geographical sretch of the Mezőföld.) - Földr. Ért. 2: 234-253.

BOROS, Á. (1959): A Mezőföld növényföldrajza. (Plant geography of the Mezőföld.) - In: ÁDÁM, L., MAROSI, S.& SZILÁRD, J. (Ed.): A Mezőföld természeti földrajza. (Physical geography of the Mezőföld.) Budapest, pp. 365-383.

DOCHMAN, G.I. (1968): Lesosteppe Europeiskoj castu SSSR. (Die Waldsteppe der europäischen teiles der UdSSR.) - Nauka, Moskau, 270 pp.

JANKÓ, B.& ZÓLYOMI, B. (1962): Salvia nutans L. und S. bentonicifolia Ettl. in Ungarn. - Acta bot. hung. 8: 263-277.

JÁRAI-KOMLÓDI, M. (1968): The Late Glacial and Holocene flora of the Hungarian Great Plain.- Annls Univ. Scient. bpest. 9-10: 199-225.

JÁRAI-KOMLÓDI, M. (1969): Adatok az Alföld negyedkori klima- és vegetációtörténetéhez. II. [Quaternary climatic changes and vegetational history of the Great Hungarian Plain.II.] - Bot. Közl. 56: 43-55.

KANITZ, Á. (1863): Reliquae Kitaibelianae partim nunc primum publicatae e manuscriptis Musei Nationalis hungarici III., IV. Kitaibelii: Iter marmarosense primum 1796 et secundum 1815 susceptum. Verh.zool.-bot. Ges. 13: 57-118.

KERNER, A. (1863): Das Pflanzenleben der Donaulander. - Innsbruck, 348 pp.

MENYHÁRT, L. (1877): Kalocsa vidékének növényzete. (Die Vegetation der Umgebung von Kalocsa.) - Budapest.

MIHÁLTZ, I. (1967): A Dél-Alföld felszínközeli rétegeinek földtana. [Geological stratification of the superficial layer in S-Great Hungarian Plain.] - Földt.Közl. 97(3): 294-307.

MOLNÁR, B. (1979): A Duna-Tisza köze természeti viszonyai. [Natural circumstances between the Duna and Tisza rivers.] - In: TÓTH,K. (Ed.): Nemzeti park a Kiskunságban. [National Park in the Kiskunság.] - Natura, Budapest, pp. 64-73.

NICKLFELD, H. (1971): Bericht über die Kartierung der Flora Mitteleuropas. - Taxon 20: 545-571.

PIELOU, E.C. (1975): Ecological diversity. - Wiley and Sons Inc., New York, 165 pp.

PINCZÉS, Z. (1956): A Déli Bükk és előterének néhány fejlődéstörténeti problémája. (Einige entwicklungsgeschichte Probleme von Südabhange und Vorraume des Bükkgebirges.) - Közlem. a Debreceni KLTE Földr. Int. 26: 1-12.

RAUNKIAER, C. (1907): The life-form of plants and their bearing on geography. - København, 104 pp.

SHANNON, C.E. (1948): The matematical theory of communication. - Bell.Syst.techn. J. 27: 379-423.

SOÓ, R. (1964-80): A magyar flora és vegetáció rendszertani-növényföldrajzi kézikönyve I-VI. (Synopsis systematico-geobotanica florae vegetationisque Hungariae. I-VI). - Akadémiai Kiadó, Budapest (1964): 589 pp., (1966): 655 pp., (1968): 506 pp., (1970): 614 pp., (1973): 723 pp., (1980): 556 pp.

SZUJKÓ-LACZA, J.& RAJCZY, M. (1983): Similarity investigations on a loess steppe fragment in a forest-steppe in Hungary. - (in press).

ZÓLYOMI, B. (1957): Der Tatarenahorn-Eichen-Lösswald der Zonalen Waldsteppe (Acereto Tatarici-Quercetum). - Acta bot. hung. 3: 401-429.

ZÓLYOMI, B. (1958): Budapest és környékének természetes növénytakarója. (Tapis végétal naturel de Budapest et de ses envirous.) In: PÉCSI, M. (Ed.): Budapest természeti képe. [Natural history of Budapest.] - Akadémiai Kiadó, Budapest, pp. 511-642.

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