PROGRAM of the RAS Border

"WILDLIFE: CURRENT STATUS AND DEVELOPMENT PROBLEMS"
Subprogram "The dynamics of forest ecosystems"

Project "**Ecosystem functions of the ground vegetation in boreal forests of the European Russia**"

Project leader – Dr. Larisa G. Khanina (IMPB RAS)

A database complex on characteristics of plant species and groups of species of forest ground vegetation was developed. It incorporates information about
- plant biomass,
- plant chemical composition,
- ecological indicator values for plants
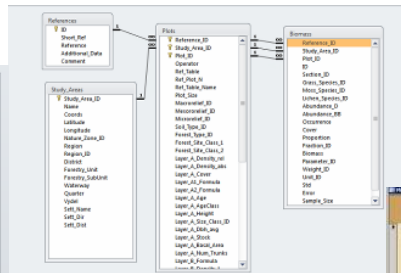
The database complex is based on data from more than 100 scientific sources, and it contains data about more that 1000 species of vascular plants, mosses and lichens

Aiming the modeling of ecological cycles it was suggested to identify a number of **functional groups** of species (FGs) in forest ground vegetation taking into account species' **ecological-coenotic group** and species' **life form**

Results of discriminant analysis of the Database «Elements»

• Multidimensional technique was suggested and approved for analysis of the databases on biomass and chemical composition of plants aiming to **verify FGs which were identified by experts**

• The greatest differences in above- and below-ground biomass of vascular plants are observed between **spatial patches** determined in ground vegetation by the dominant FG

LBr – lichens
MBr – mosses
Br – boreal grasses
TH – boreal tall herbs
Br_m – boreal small herbs,
Br_k Olg, Pn, – boreal, oligotrophic and pine dwarf shrubs
Wt – water-marshes plants,
 Nt – nitrophilous plants