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ARCHITECTONICS OF BOREAL SPECIES IN THE SUBGENUS *SALIX* AND *VETRIX* DUMORT.

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Abstract. *Background.* The basis for understanding the patterns of plant growth and development is the research of their structural and functional organization. One of the successfully developing areas of this research is the study of architectural models of woody plants. At the same time, widespread species of willow in the middle belt of European Russia from subgenus Salix and Vetrix are not fully studied in this respect. The *goal* is to develop a methodology for studying the structural and functional organization of dioecious tree species and on its basis to identify and describe the main structural and functional units (architectural modules) of boreal species of willows of subgenus Salix and Vetrix. *Materials and methods.* Architectural modules are described for 15 boreal species in subgenus Salix and Vetrix. For this, a method based on the analysis of three features of the structural and functional organization of the species was developed: ramification type, the size of the vegetative shoots die-off zone and the longevity of the vegetative parts of the earrings. *Results.* 7 architectural modules have been identified in the examined species: one- and two-stage drop-down earrings on the basis of acro-, meso- and basitonium, and also with conditionally non-decreasing earrings based on acrotonia. It is established that the degree of death of the upper metamers of annual shoots correlates with the development of shoots from sleeping buds: in low shrubs such shoots develop 4–6 times more often than in trees and high shrubs. It is determined that the architectural modules of female individuals, unlike male individuals, are more branched and contain a greater number of annual assimilative shoots. It is shown that maximum number of architectural types is characteristic of the upper and middle branches, and the smaller of the lower branches in the crowns of female and male individuals of trees and tall shrubs. *Conclusions.* The offered technique allows us to characterize all the existing variety of architectural modules of boreal species of willows. It is established that architectural modules differ in individuals of different sexes developing under different lighting conditions inside the crown.

Key words*:* genus *Salix*, genus *Vetrix*, boreal species of willow, three-year-old shoots system, formula and scheme of a three-year-old shoots system, architectural module.