

VIII. Annotated Nomenclature Tables

The four tables in this chapter serve two purposes: taxonomy and documentation. Classification is a fundamental exercise in biology because it has important implications for how data is interpreted within a synthetic framework. There is certainly no general agreement on how to classify all of the various cell groups and fiber tracts in the brain, although for the last century virtually all attempts have been based on interpretations of how the brain vesicles of the embryonic neural tube differentiate.

The approach taken here relies on a combination of embryonic and of adult structural and functional criteria, and the result is a modification of the scheme presented in the first edition of *Brain Maps* (Swanson 1992a). Basically, the CNS is viewed as consisting of three major parts: a core brainstem-spinal cord, with cerebral and cerebellar hemispheres attached to the dorsal brainstem. The cerebrum and cerebellum each have cortical and nuclear divisions that may be further subdivided, and core cell groups have been arranged into sensory, motor, reticular, and precerebellar parts (except in the interbrain, where a more traditional classification has been maintained).

Table A is brief and presents the gross anatomical features of the rat CNS, whereas *Tables B and C* list all of the cell groups and fiber systems, respectively, of the rat CNS shown in the atlas, in a format that has been found useful for summarizing the results of global histochemical mapping studies (see Arriza et al. 1988; Wada et al. 1989). *Table D* outlines the gross anatomical features of the rat peripheral nervous system (PNS). Because this book deals primarily with the brain, it is rather incomplete and emphasizes features associated with the atlas. More detailed accounts can be found in the references discussed in Section II.

Documentation from the primary literature is an important feature of these tables. Thus, one or more key reference is given for each feature listed in Tables B and C, and brief discussion of difficult points is provided where deemed useful. The references are to particularly useful studies in the neuroanatomical literature that indicate what architectonic, and sometimes connectional, criteria were used to delimit that structure. This is meant to provide a convenient entry to the literature; it certainly is not possible here to review critically all of the literature about each cell group. Tables A and D contain many traditional terms that are difficult to trace through the literature, and are not heavily annotated.