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The Ciliate Atlas, a Unique Guide to 300 Species Used as Indicators of Water Pollution: 2,000 Pages, 6,000 Figures

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This treatise comprises 4 volumes with about 500 pages each and describes in detail the morphology and ecology of about 300 species listed by SLADECEK et al. (1981) as indicators of water quality. The morphology is documented by 6,153 figures, 2,000 of them are original light micrographs of living and silver prepared specimens and original scanning electron micrographs. Moreover several species are redescribed in detail (e.g., *Dileptus margaritifer*, *Trachelius ovum*, *Loxophylum meleagris*, *Platynematum sociale*). Volume IV contains an easy to use picture key (74 pages) for beginners and non-specialists to all taxa described in Vols. I (Cyrtophorida, Oligotrichida, Hypotrichia, Colpodea), II (Peritrichia, Heterotrichida, Odontostomatida), III (Hymenostomata, Prostomatida, Nassulida), and IV (Gymnostomatea, Loxodes, Suctoria). We also reviewed the faunistic and ecologic literature distributed in many thousands small papers. This provides the saprobic evaluation of individual species with a more reliable basis and shows research needs. Vols. I and II, out of print since 1993, were reprinted. Thus the complete series is available! It can be ordered from the Wasserwirtschaftsamt Deggendorf, Postfach 2060, D-94460 Deggendorf, Germany. Price per Volume about 100 German Mark. Supported by the Österreichischen Fonds zur Förderung der wissenschaftlichen Forschung (Projekt P8924-Bio) and the Bayerisches Landesamt für Wasserwirtschaft.

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Fine Structural Specializations in a Jumping Peritrichous Ciliate, *Hastatella radians* Erlanger, 1890 (Ciliophora, Peritrichia)

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*Hastatella radians* is a rare planktonic ciliate living in temporary pools and in the pelagial of lakes and slowly running, large rivers. It lacks a stalk but possesses an anterior and equatorial girdle of mobile spines continuous with the somatic cortex. The length and number of the spines decreases drastically, i.e. by 50% and more in laboratory cultures, obviously due to the lack of environmental stress. Previous light microscopic studies have suggested that the spines are passively moved by contractions of the cell and/or of individual myonemes, thereby producing the conspicuous jumps driving the cell through the medium. However, our electron microscopic investigations suggest that the spines can move independently of the myonemes, because they contain specialized structures lacking in other peritrichs, viz. subcortical fibres and microtubules. The closely packed fibres extend underneath the epiplasm and have a complicated periodic structure reminiscent of that known from flagellar rootlets. Underneath the striated fibres is a layer of loosely arranged microtubules extending to the top of the spines. The general ultrastructure of *H. radians* is very similar to that of other peritrichs. There is, for instance, a scopula organelle composed of short cilia lacking the central microtubule pair and the axosome. The oral infraciliature consists of ciliated adorals and a paroral having only the distal basal bodies of the dikinetids ciliated.