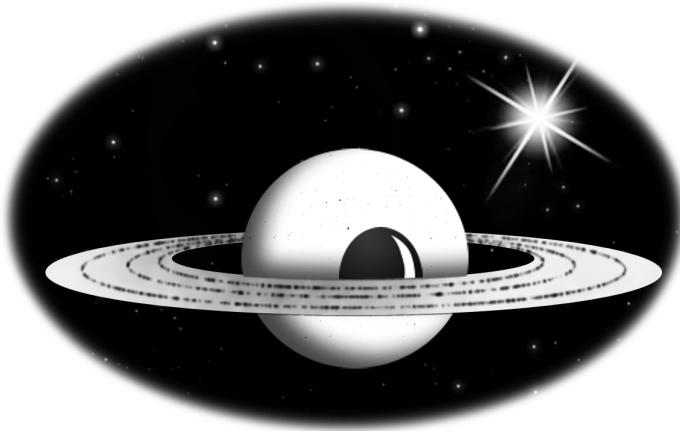


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SC Bioflux SRL, 54 Ceahlău Street, Cluj-Napoca, 400488, Romania, European Union.
Ioan Valentin Petrescu-Mag,
e-mail: zoobiomag2004@yahoo.com
Ruxandra Mălină Petrescu-Mag,
e-mail: pmalina2000@yahoo.com

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Contents

Voicu D. M. F., Mitoi M. E., Gavriloaie C., Helepciu F. E., Toma N., 2019 Chemical investigations of lichen biomass in *Usnea barbata*, *Cetraria islandica*, and *Xanthoria parietina* species. ELBA Bioflux 11(1):1-8.

Papuc T., Petrescu-Mag I. V., Gavriloaie C., Botha M., Kovacs E., Coroian C. O., 2019 Swimming in the mud – a short review of environmental parameter ranges tolerated by *Clarias gariepinus*. ELBA Bioflux 11(1):9-17.

Petrescu-Mag I. V., Papuc T., 2019 Why lichens are excellent bioindicators of trace metal pollution in urban areas. ELBA Bioflux 11(1):18-23.

Petrescu-Mag I. V., Papuc T., 2019 Extending the life span of animals and humans, only a matter of time. ELBA Bioflux 11(1):24-26.

Oroian I. G., Balint C., Oroian C. F., Gavriloaie C., 2019 Dipnoi group - extreme adaptation to drought and muddy water. ELBA Bioflux 11(1):27-31.

