

IV

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ON ORTHOPTERA CONSERVATION
in memoriam Antonio Galvagni (1924 - 2015)

PROGRAM



of most of the about 700 loudly singing species, spread over many thousands of individual sound recordings.

Passive acoustic monitoring as a possible method to detect night-singing Orthoptera

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Inspired by the serendipitous discovery of *Acheta pantescus* Massa, Cusimano, Fontana & Brizio, 2022 during the review of passive acoustic monitoring (PAM) recordings, we explored the potential of unsupervised recorders as tools for the assessment of orthopteran biodiversity. We report the results of a one-month, nightly PAM campaign in two Apulian locations, that resulted in the observation of no less than 19 (nineteen) species, including the observation of *Pteronemobius heydenii* (Fischer, 1853), previously unreported for the area, and the putative recognition of the Lombard effect in the songs by *Oecanthus pellucens* (Scopoli, 1763). Our presentation introduces the concept of Surviving Acoustic Signature (SAS) as opposed to an exemplary audio file (RAS for Reference Audio Sample), and addresses the special issues of medium-quality record settings (24 kHz sampling frequency, 0 kHz - 12 kHz band), chosen as the best compromise between quality and storage capacity. After illustrating the manual filtering techniques adopted for song separation in contested soundscapes, an analysis and diagnosis workflow is outlined, and some of the several lessons learned are presented. At the price of substantial labour, PAM proved suitable for a preliminary assessment of the diversity of the night-singing orthoptera.