

## The Palearctic Titmouse Species (Aves: Paridae: *Parus sensu lato*) — A current survey\*

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*\*Dedicated to Prof. Jochen Martens in honour of his 65th birthday, June 10, 2006*

### Abstract

Within the Palearctic taxa belonging to the genus *Parus* s.l. there are sympatric species at all levels of similarity. However, during the entire 20th Century no other sympatric cryptospecies were discovered, despite the progressive refinement of comparative methods. All the taxonomic changes introduced were related to determining the status of allopatric and parapatric taxa, in particular with respect to either 1. the subspecies or species status or, more rarely, 2. direct systematic relationships in the cases of *Parus superciliosus*, *P. lugubris hyrcanus* and *P. davidi*. This taxonomic survey of Palearctic titmouse species aims at a synthesis of the results of both classical morphological methods on the one hand and the more recent bioacoustic and molecular studies on the other. Under the assumptions of the biospecies concept 22 Palearctic titmouse species are distinguished, which at a higher taxonomic level belong to fourteen geospecies. Most species embrace different “population groups”, which represent the smallest bundling of taxa on a morphological-geographical basis. Within Palearctic Paridae each of the 44 population groups presented in this paper is distinguished by a distinct morphological character set. Mean values of several morphometric measurements, such as wing length, tail length and relative tail length are provided for each population group in the species list (Section VI).

**Key words:** Intraspecific vicariance, geospecies, superspecies, allospecies, tail/wing index, wing/tip index

### I. The occasion

After a century during which intermediate species limits and thus the dimension of avian biodiversity in the Palearctic region have been a relatively stable aspect of ornitho-systematics (the Hartert-Vaurie era: Eck 2004), this view seems gradually to be undergoing a radical change. Recently, the integration of new techniques, in particular