University of Groningen

Polymorphic common buzzards in time and space

Kappers, Elena F.

DOI:
[10.33612/diss.146101441](https://doi.org/10.33612/diss.146101441)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2020

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Kappers, E. F. (2020). *Polymorphic common buzzards in time and space*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.146101441>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Polymorphic Common buzzards in time and space

Elena F. Kappers

The research presented in this thesis was conducted at the Conservation Ecology Group, Groningen Institute for Evolutionary Life Sciences, University of Groningen, The Netherlands, and at the Department of Behavioural Ecology and Evolutionary Genetics, Max Planck Institute for Ornithology, Seewiesen, Germany.

The study was funded by the University of Groningen and the Max Planck Institute for Ornithology.

Printing of this thesis was supported by the University of Groningen.

Layout: Elena Kappers

Photos: Elena Kappers, Christiaan de Vries, Anneke Alberda, Christiaan Both.

Cover design: Yifan Pei, inspired by a photo of Raymond Klaassen.

Printed by: ProefschriftMaken

university of
 groningen

Polymorphic Common buzzards in time and space

PhD thesis

to obtain the degree of PhD at the
University of Groningen on the authority of the
Rector Magnificus Prof. C. Wijmenga
and in accordance with
the decision by the College of Deans.

This thesis will be defended in public on
Friday 4 December 2020 at 16.15 hours

by

Elena Frederika Kappers

born on 6 September 1988
in Apeldoorn

Supervisors

Prof. C. Both

Prof. B. Kempenaers

Assessment Committee

Prof. T. Piersma

Prof. M.E. Maan

Prof. J.E. Brommer

Voor Opa en Oma Kappers,

Contents

Chapter 1	General introduction	9
Chapter 2	Classification and temporal stability of plumage variation in Common buzzards	21
Chapter 3	Inheritance patterns of plumage coloration in Common buzzards <i>Buteo buteo</i> do not support a one-locus two-allele model	41
Chapter 4	Directional change of morph frequencies over time in a Dutch population of Common buzzards <i>Buteo buteo</i>	53
Chapter 5	Colour polymorphism predicts exploratory behaviour but not habitat choice during natal dispersal in a raptor species	91
Chapter 6	General discussion	155
	References	167
	Samenvatting	179
	Acknowledgements	183
	List of co-authors	190
	About the author	191