

# ENDANGERED WILDLIFE TRUST

## Introduction to Data Papers

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# The African Crane Database (1978-2014): Records of three threatened crane species (Family: Gruidae) from southern and eastern Africa

Tanya Smith<sup>‡</sup>, Samantha Page-Nicholson<sup>§</sup>, Kerryn Morrison<sup>‡</sup>, Bradley Gibbons<sup>§</sup>, M. Genevieve W. Jones<sup>||</sup>, Mark van Niekerk<sup>¶</sup>, Bronwyn Botha<sup>#</sup>, Kirsten Oliver<sup>□</sup>, Kevin McCann<sup>□</sup>, Lizanne Roxburgh<sup>§</sup>

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## Abstract

### Background

The International Crane Foundation (ICF) / Endangered Wildlife Trust's (EWT) African Crane Conservation Programme has recorded 26 403 crane sightings in its database from 1978 to 2014. This sightings collection is currently ongoing and records are continuously added to the database by the EWT field staff, ICF/EWT Partnership staff, various partner organizations and private individuals. The dataset has two peak collection periods: 1994-1996 and 2008-2012. The dataset collection spans five African countries: Kenya, Rwanda, South Africa, Uganda and Zambia; 98% of the data were collected in South Africa. Georeferencing of the dataset was verified before publication of the data. The



# Tracking data from nine free-roaming Cheetahs (*Acinonyx jubatus*) collared in the Thabazimbi area, Limpopo Province, South Africa

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## Abstract

### Background

In partnership with the University of Pretoria, the Endangered Wildlife Trust's Carnivore Conservation Programme collared six male and three female free-roaming Cheetahs (*Acinonyx jubatus*) in the Thabazimbi area in Limpopo Province, South Africa. This study was undertaken to determine the spatial ecology of free-roaming Cheetahs that occur outside of formal protected areas on private rangeland, where they frequently come into conflict with, and are sometimes killed by, private landowners. The data were collected between September 2003 and November 2008, resulting in a total of 3165 location points (65 points from VHF collars and 3100 from GPS collars) for nine individual Cheetahs.

### New information

This dataset provides distribution information about this Vulnerable species occurring outside of protected areas within South Africa. The dataset has been published to the



# Why share data?

<https://conservationbytes.com/2018/01/07/to-share-or-not-to-share-is-no-longer-the-question/> - Corey Bradshaw

*“While data theft can occur, in reality it is unlikely that anyone would bother .., mainly for the simple reason that in most cases, data availability is not the limiting factor for scientific advancement. Another reason why this should not worry you is that far too few of us have the time to publish (research using) all of our own data, let alone someone else’s.”*

- Not sharing your data reduces your publication opportunities because others don't know what you are doing
- If you do share, at a minimum you will be cited, but you might also be contacted to be a co-author or collaborate on additional work
- Most journals no longer allow you to be data hoarder

## LETTER

### Willing or unwilling to share primary biodiversity data: results and implications of an international survey

Xiaolei Huang<sup>1,2</sup>, Bradford A. Hawkins<sup>2</sup>, Fumin Lei<sup>1</sup>, Gary L. Miller<sup>3</sup>, Colin Favret<sup>4</sup>, Ruiling Zhang<sup>1</sup>, & Gexia Qiao<sup>1</sup>

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<sup>4</sup>Université de Montréal Biodiversity Centre, 4101 rue Sherbrook est, Montréal QC H1 x2B2, Canada

## RESEARCH

## Open Access

### Towards mainstreaming of biodiversity data publishing: recommendations of the GBIF Data Publishing Framework Task Group

Tom Moritz<sup>1</sup>, S. Krishnan<sup>2</sup>, Dave Roberts<sup>3</sup>, Peter Ingwersen<sup>4,5</sup>, Donat Agosti<sup>6</sup>, Lyubomir Penev<sup>7</sup>, Matthew Cockerill<sup>8</sup>, Vishwas Chavan<sup>9</sup>

# What is a Data Paper?

- A searchable metadata document, describing a particular dataset or a group of datasets
- Published in the form of a peer-reviewed article in a scholarly journal
- Unlike a conventional research article, the primary purpose of a data paper is to describe data and the circumstances of their collection, not to report hypotheses, data analysis or provide discussion and conclusions

# What are its purposes and benefits?

- to provide a citable journal publication that brings scholarly credit to the data publishers
- to describe the data in a structured human-readable form
- to bring the existence of the data to the attention of the scholarly community
- to increase the visibility, usability and credibility of the data resources you publish
- to track more effectively the usage and citations of the data you publish



# Who publishes Data Papers?

- Pensoft is one of the main publishers that has been working with GBIF
- All their papers are peer-reviewed, open access, rapidly published, available online and in print
- Pensoft journals charge for publishing, but rates are low relative to other open access journals (€200+, but there are discounts for African authors)
- ABC Journal (Bothalia) is also a good option for data papers about African Biodiversity
- Additional data paper publishers listed on the GBIF website ([www.gbif.org/data-papers](http://www.gbif.org/data-papers))



# Journals that publish biodiversity-related data papers

Journal	Publisher	Open Access	Publication cost	Impact factor (2016)
<a href="#">Arxius de Miscellània Zoològica</a>	Nat Hist Museum of Barcelona	<a href="#">Yes</a>	€0	-
<a href="#">Biodiversity Data Journal</a>	Pensoft	<a href="#">Yes</a>	<a href="#">€300</a>	-
<a href="#">BioInvasions Records</a>	REABIC Journals	<a href="#">Yes</a>	<a href="#">€600</a>	0.835
<a href="#">BioRisk</a>	Pensoft	Yes	<a href="#">€300</a>	-
<a href="#">Biota Colombiana</a>	Humboldt Institute, Colombia	Yes	€0	-
<a href="#">BMC Ecology</a>	Biomed Central	<a href="#">Yes</a>	<a href="#">€1,745</a>	2.896
<a href="#">BMC Plant Biology</a>	Biomed Central	<a href="#">Yes</a>	<a href="#">€1,745</a>	3.964
<a href="#">Botanical Studies</a>	SpringerOpen	<a href="#">Yes</a>	<a href="#">€600</a>	1.452
<a href="#">Check List</a>	Biotaxa	<a href="#">Yes</a>	<a href="#">€27</a>	-
<a href="#">China Scientific Data</a>	Chinese Academy of Sciences	Yes	€458	-
<a href="#">Data in Brief</a>	Elsevier	<a href="#">Yes</a>	<a href="#">€458</a>	-
<a href="#">Data</a>	MDPI Open Access Journals	Yes	<a href="#">€0</a>	-



# Journals that publish biodiversity-related data papers

Journal	Publisher	Open Access	Publication cost	Impact factor (2016)
<a href="#">Earth System Science Data</a>	Copernicus GmbH	<a href="#">Yes</a>	<a href="#">€0</a>	6.696
<a href="#">F1000 Research</a>	F1000 Research Ltd	<a href="#">Yes</a>	<a href="#">€917</a>	-
<a href="#">The Freshwater Metadata Journal</a>	Univ of Nat Res & Life Sci, Vienna	<a href="#">Yes</a>	<a href="#">€0</a>	-
<a href="#">Geoscience Data Journal</a>	Wiley	<a href="#">Yes</a>	<a href="#">€1,200</a>	2.800
<a href="#">GigaScience</a>	Oxford University Press	<a href="#">Yes</a>	<a href="#">€924</a>	6.871
<a href="#">MycoKeys</a>	Pensoft	<a href="#">Yes</a>	<a href="#">€550</a>	3.000
<a href="#">Nature Conservation</a>	Pensoft	<a href="#">Yes</a>	<a href="#">€550</a>	1.355
<a href="#">NeoBiota</a>	Pensoft	<a href="#">Yes</a>	<a href="#">€550</a>	-
<a href="#">PhytoKeys</a>	Pensoft	<a href="#">Yes</a>	<a href="#">€550</a>	1.116
<a href="#">PLOS ONE</a>	Plos	<a href="#">Yes</a>	<a href="#">€1,370</a>	2.806
<a href="#">Scientific Data</a>	Nature Publishing Group	<a href="#">Yes</a>	<a href="#">€1,050</a>	4.836
<a href="#">Taxon</a>	Internat. Assoc. Plant Taxonomists	<a href="#">Yes</a>	<a href="#">€1,800</a>	2.450

# Examples of journals that publish data papers



## **Biodiversity Data Journal**

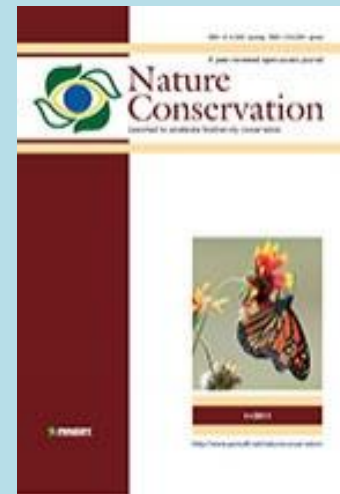
Biodiversity science containing taxonomic, floristic/faunistic, morphological, genomic, phylogenetic, ecological or environmental data on any taxon of any geological age from any part of the world

<http://www.pensoft.net/journals/bdj/>

## **Nature Conservation**

Mobilize ideas and data in all aspects of conservation of nature

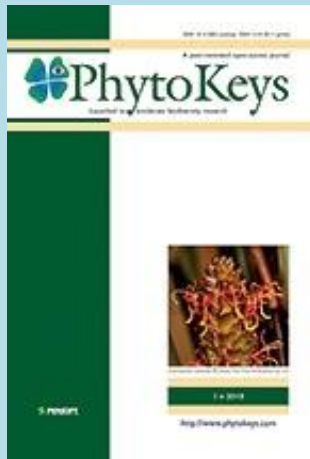
<http://www.pensoft.net/journals/natureconservation/>



# Journals that publish data papers

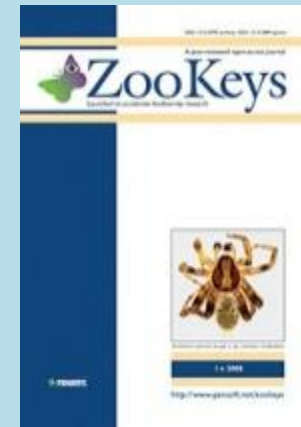
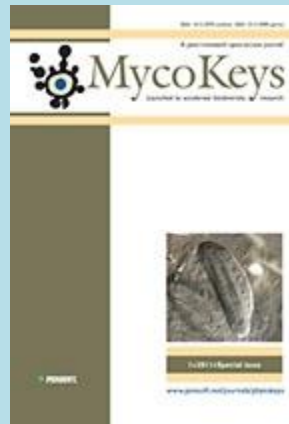
## PhytoKeys - systematic botany

<http://www.pensoft.net/journals/phytokeys/>



## MycoKeys - systematics and biology of fungi (including lichens)

<http://www.pensoft.net/journals/mycokeys/>



**ZooKeys - systematic zoology, phylogeny and biogeography**  
<http://www.pensoft.net/journals/zookeys/>

*ETC ....*

# Journals that publish data papers

## African Biodiversity and Conservation (ABC) Journal

<http://www.abcjournal.org>

Data papers are a new article type, and are not advertised on their website yet

No publication charges

Bothalia  
AFRICAN BIODIVERSITY & CONSERVATION

Home | About | Author | Reviewer | Reader | Archives | Thesis | Search

**Table of Contents**

<b>Original Research</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
A new long-tubed subspecies of <i>Pelargonium dipetalum</i> (section <i>Hoorea</i> ) (Geraniaceae) from the Albertinia-Swellendam area in Western Cape Province, South Africa M. Marianne le Roux, John C. Manning Vol 44, No 1 (2014), 8 pages	(08 December 2014) Downloads: 2995
<b>Review Article</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
Factors influencing the adaptation and distribution of <i>Colophospermum mopane</i> in southern Africa's mopane savannas – A review Rudzani A. Makhado, Isaac Mapaure, Martin J. Potgieter, Wilmiem J. Luus-Powell, Amani T. Saidi Vol 44, No 1 (2014), 9 pages	(12 November 2014) Downloads: 3869
<b>Nomenclatural Changes</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
<i>Moraea orthrosantha</i> (Iridaceae: Irideae), a new species from Namaqualand, South Africa Peter Goldblatt, John C. Manning Vol 44, No 1 (2014), 4 pages	(04 July 2014) Downloads: 3285
<b>Nomenclatural Changes</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
A new species of <i>Berkheya</i> (Asteraceae, Arctotideae) from the Northern Cape, South Africa Nicola G. Bergh, Nick A. Helme Vol 44, No 1 (2014), 5 pages	(18 September 2014) Downloads: 3965
<b>Nomenclatural Changes</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
Taxonomic status of <i>Pelargonium reniforme</i> Curt. Janine E. Victor, Mmampho Aphone Vol 44, No 1 (2014), 3 pages	(08 October 2014) Downloads: 3401
<b>Nomenclatural Changes</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
<i>Ledebouria caesiomontana</i> A.J.Hankey & N.Hahn (Hyacinthaceae: Hyacinthoideae): A new species from the Blouberg centre of endemism, Limpopo, South Africa Andrew J. Hankey, Norbert Hahn, Matt H. Buys Vol 44, No 1 (2014), 4 pages	(04 November 2014) Downloads: 2459
<b>Nomenclatural Changes</b> <a href="#">Open Access</a>	<a href="#">HTML</a>   <a href="#">EPUB</a>   <a href="#">XML</a>   <a href="#">PDF</a>
<i>Gladiolus filliformis</i> , a poorly known species from North West Province, South Africa Norbert Hahn, Hermien Roux Vol 44, No 1 (2014), 4 pages	(04 November 2014) Downloads: 2845

# Journals that publish data papers

## Scientific Data

(published by Springer Nature)

[www.nature.com/sdata/](http://www.nature.com/sdata/)

Scientific Data is a peer-reviewed, open-access journal for descriptions of scientifically valuable datasets, and research that advances the sharing and reuse of scientific data. We aim to promote wider data sharing and reuse, and to credit those that share.



**Data descriptor = Data paper**

Publication costs: €1,305

# Types of datasets suitable for data papers

- No hard and fast rules
- Bigger is **probably** better
- The dataset should be of some **significance**, e.g. long time scale, first dataset of its kind, entire database of an institution or a project
- Bear in mind that publishers of data papers will also be looking to improve their **publication ratings** and metrics
- Like any scientific publication, the decision to publish or not lies with the journal editors
- Look at other **examples** of published data papers for further guidance

# Types of datasets suitable for data papers

- Data papers can describe multiple datasets that were collected by more than one institution or project
- Datasets should have a geographic or taxonomic focus, or another thematic focus, e.g., threatened species, invasive species
- Datasets should form the basis of a research story, so that a coherent scientific publication can be developed

# Steps in the publishing process

**1**

- Clean and standardize the dataset and check georeferencing
- Format the dataset for GBIF using DarwinCore format

**2**

- Prepare a metadata document (which can later be converted to a data paper - using the Pensoft writing tool or a template)

**3**

- Upload the data and metadata to GBIF\*, using a GBIF node or data hosting centre
- Export the metadata text file

**4**

- Convert metadata to a data paper, submit to a journal, revise after peer review, and publish



# Publishing the dataset



- Most challenging part of the process is preparing the dataset itself for publication
- Data should be published to GBIF via the Integrated Publishing Toolkit or IPT
- You don't need your own IPT – data can be published through an established IPT in your country or through any data hosting institution
- Once the dataset is published, it will have a DOI (Digital Object Identifier), to which the data paper will refer e.g. 10.15468/cadrut



# Writing the metadata

- The metadata that needs to be provided when a dataset is published to GBIF via the IPT forms the basis of the content of a data paper
- Therefore the IPT provides a tool for exporting the metadata into a text file that can later be edited and published
- If publishing in the Pensoft suite of journals, this file can be directly imported into the Arpha writing tool <https://arpha.pensoft.net/> and submitted after edits
- Otherwise this document can be edited and submitted to other data paper journals



# Available templates


- No need to use a template
- Metadata can be written directly into the metadata sections on the IPT
- However, a) if your data is being published by someone else, i.e. another institution's IPT, you will need to provide metadata, and b) developing metadata can be time-consuming
- Word document template extracted from Arpha Writing Tool is available
- Scientific data also has a downloadable template for data descriptors

<https://www.nature.com/sdata/publish/submission-guidelines>



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▼ Article metadata

- Title & Authors
- Abstract & Keywords 
- Classifications Edit
- Funder

Introduction

General description

Project description

Sampling methods

Geographic coverage

Taxonomic coverage

Traits coverage

Temporal coverage

Collection data


Usage rights


Data resources

Additional information


Acknowledgements

Author contributions

 References

 Supplementary files

 Figures

 Tables

Validate

Technical review

Biodiversity Data Journal : Data Paper (Biosciences)

 Print

## Tracking data from nine Cheetahs (*Acinonyx jubatus*) collared in the Thabazimbi area, Limpopo Province, South Africa.

Kelly Marnewick<sup>‡,§</sup>, Samantha Page-Nicholson<sup>‡</sup>, Lizanne Roxburgh<sup>‡</sup>, Michael Somers<sup>§</sup>

<sup>‡</sup> Endangered Wildlife Trust, Johannesburg, South Africa

<sup>§</sup> Centre for Wildlife Management, Centre for Invasion Biology, University of Pretoria, Pretoria, South Africa

Corresponding author: Kelly Marnewick ([kellym@ewt.org.za](mailto:kellym@ewt.org.za))

© 2016 Kelly Marnewick, Samantha Page-Nicholson, Lizanne Roxburgh, Michael Somers.

Citation: () . doi:



### Abstract

#### Background

In partnership with the University of Pretoria, The Endangered Wildlife Trust's (EWT) Carnivore Conservation Programme (CCP) collared nine free-roaming Cheetahs (*Acinonyx jubatus*) in the Thabazimbi area in Limpopo Province, South Africa. This study was undertaken to determine the spatial ecology of free-roaming Cheetahs and how they utilize areas that lack larger, competing predators such as Lions (*Panthera leo*) and Spotted Hyenas (*Crocuta crocuta*). The data were collected between September 2003 and July 2009; resulting in a total of 3165 location points for nine individual Cheetahs. Further, this dataset provides distribution information about this Vulnerable species occurring outside of protected areas within South Africa.

#### New information

www

### Keywords

Satellite tracking, free-roaming Cheetah, conservation, spatial ecology, outside of protected areas

### Introduction

Three populations of the Vulnerable Cheetah (*Acinonyx jubatus*) exist in South Africa: 1) a population of approximately **XXX**

# Data paper sections

## Introduction\*

### General description\*

Purpose\*

Additional Information

### Project description\*

Title\*

Personnel\*

Study area description\*

Design description\*

Funding\*

### Sampling methods

Study extent; Sampling description; Quality control; Step description

## Geographic coverage\*

Description\*

Coordinates (bounding coordinates, minimum and maximum latitude and longitude)

## Traits coverage (optional)

## Temporal coverage\*

Date range

Notes



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# Data paper sections

## Collection data (optional)

Collection name

Collection identifier

Parent collection identifier

Specimen preservation method

Curatorial unit

## Usage rights\*

Use licence\*

IP rights notes

## Data resources\*

Data package title\*

Resource link

Alternative identifiers

Number of data sets\*

## Additional information

(e.g. papers published from the dataset already)

## Acknowledgements

## Author contributions

## References\*

## Supplementary files

## Figures

## Tables



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# How to export from IPT

Home

Manage Resources

About



Summary

Data Records

Downloads

Versions

How to cite

Rights

GBIF Registration

Keywords

Contacts

Geographic Coverage

Taxonomic Coverage

Temporal Coverage

Project Data

Sampling Methods

Additional Metadata

[Edit](#)

## EWT: Carnivore Conservation Programme Cheetah Tracking Data

*Latest version published by Endangered Wildlife Trust on Nov 3, 2017*

In partnership with the University of Pretoria, The Endangered Wildlife Trust's (EWT) Carnivore Conservation Programme collared nine free-roaming Cheetahs (*Acinonyx jubatus*) in the Thabazimbi area in Limpopo Province, South Africa. This study was undertaken to determine the spatial ecology of free-roaming Cheetahs and how they utilize areas that lack larger, competing predators such as Lions and Spotted Hyenas. The data were collected between September 2003 and November 2008; resulting in a total of 3165 location points for nine individual Cheetahs.



 GBIF

 DwC-A

 EML

 RTF

 Versions

 Rights

 Cite this

## Data Records

The data in this occurrence resource has been published as a Darwin Core Archive (DwC-A), which is a standardized format for sharing biodiversity data as a set of one or more data tables. The core data table contains 3,165 records.

This IPT archives the data and thus serves as the data repository. The data and resource metadata are available for download in the [downloads](#) section. The [versions](#) table lists other versions of the resource that have been made publicly available and allows tracking changes made to the resource over time.

## Downloads

Download the latest version of this resource data as a Darwin Core Archive (DwC-A) or the resource metadata as EML or RTF:

Data as a DwC-A file [download](#) 3,165 records in English (77 KB) - Update frequency: not planned

Metadata as an EML file [download](#) in English (12 KB)

Metadata as an RTF file [download](#) in English (12 KB)

# How to import into Arpha

## More Tips

[Invite Co-Authors / Contributors](#)

[Classifications](#)

[Add to Article Collection](#)

## Import References

[Zotero](#)

[Endnote](#)

[Reference Manager](#)

## Import a Data Paper Manuscript

[From GBIF IPT Metadata \(EML\)](#)

[From DataONE Metadata \(EML\)](#)

[From LTER Metadata \(EML\)](#)

## Import Occurrence Records

[From Excel Spreadsheet](#)

[Manually](#)

[From GBIF](#)

[From BOLD](#)

[From iDigBio](#)

[From Plutof](#)

- The Arpha writing tool requires some investment in time to learn how to use
- Persist – it is worth the effort as the result is a perfectly formatted document that is ready for submission



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# Why go the extra mile to publish a data paper?

- Takes time to write a data paper and (usually) costs money to publish it
- Improves reusability of your data by providing a rich source of metadata to the user
- Currently datasets are not being properly cited (see published study), especially when only published to GBIF and not accompanied by a data paper. The data paper provides a mechanism for proper recognition/ citation of you as the data publisher

# Resources

GBIF data papers: <https://www.gbif.org/data-papers>

Data hosting:

<https://bid.gbif.org/en/community/data-hosting/>

<https://github.com/gbif/ipt/wiki/dataHostingCentres#data-hosting-centres>

Documentation about resources metadata:

<https://github.com/gbif/ipt/wiki/resourceMetadata>

<https://github.com/gbif/ipt/wiki/GMPHowToGuide>

The Arpha Tool tips include tips for importing from GBIF IPT:

<https://arpha.pensoft.net/tips/>

Sharing Data with GBIF:

<https://www.gbif.org/publishing-data>

**Thanks for your attention.**

**Questions?**



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