



# **Corrigendum: License to Kill? Domestic Cats Affect a Wide Range of Native Fauna in a Highly Biodiverse Mediterranean Country**

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## A Corrigendum on

# License to Kill? Domestic Cats Affect a Wide Range of Native Fauna in a Highly Biodiverse Mediterranean Country

by Mori, E., Menchetti, M., Camporesi, A., Cavigioli, L., Tabarelli de Fatis, K., and Girardello, M. (2019). Front. Ecol. Evol. 7:477. doi: 10.3389/fevo.2019.00477

In the original article, there was a missing sentence in the legend for Figure 2 as published. Locations of origin of our data, including rural areas (green-lined circles) and urban centers (gray-bricked circles). The correct legend appears below.

\*\*Figure 2. Locations of origin of our data, including rural areas (green-lined circles) and urban centers (gray-bricked circles). Killings recorded far from owner's house (including those from smaller islands), i.e., with cats moving with prey in their mouth, were not shown in this map.\*\*

In the original article, there was a mistake in Figure 4 as published. The corrected Figure 4 appears below.

In the original article, there was a mistake in **Table S2** in Supplementary Material as published. The corrected **Table S2** has been integrated with data on the species killed by the 21 cats and with all the species killed by cats included those in confined environments and species complex.

A correction has been made to *MATERIALS AND METHODS*, *Data analysis on the citizen*science survey, 1:

"This analysis was carried out on the killings by the 21 cats followed for one year (Table S2, corrected). Comparing functional diversity along different ecological gradients of disturbances would make strong inference about impact of cat predation on the functional structure of vertebrate communities, but this is not feasible with citizen science data collected for the 21 cats in this study. Functional diversity can be quantified in several ways, with a myriad of functional diversity indices, not only based on functional distances in multivariate space. Some metrics were developed to quantify community assembly processes. Metrics such as functional richness, have been shown to correlate very well with ecosystem processes (Tilman et al., 1997 and references thereof)."



In the original article, there was an error. We collected a total of 2042 entries for vertebrates killed by domestic cats ... 75.8% were classified as "Least Concern" by both the IUCN and Italian Red Lists, 16.4% were "Near Threatened" or "Threatened," and the remaining 7.8% included "Data Deficient" or "Not Evaluated".

A correction has been made to **RESULTS**, *Citizen science survey*, 1-2:

"We collected a total of 2042 entries for free-ranging vertebrates killed by domestic cats (and 7 more killings of freshwater fish in confined environments) ... 17.61% taxa (including fish, thus on the total list of Table S2) were classified as "Threatened" or "Near Threatened" by at least the Italian or the international IUCN Red Lists and 7.77% as "Data Deficient" or "Not Evalutated"."

In the original article, there was an error. one amphibian species, Rana latastei, is classified as "Vulnerable," and one reptile, Elaphe quatuorlineata, is classified as "Near Threatened" by the IUCN Red List. In contrast, when grouping the species according to the Italian Red List, they included six "Near Threatened" birds and one "Vulnerable" amphibian species.

A correction has been made to **RESULTS**, *Citizen science survey*, *the end of the 4th*:

"one amphibian and one bird species, *Rana latastei* and *Passer italiae*, are classified as "Vulnerable" and one reptile, *Elaphe quatuorlineata*, is classified as "Near Threatened" by the IUCN Red List. In contrast, when grouping species according to the Italian Red List, a further "Near Threatened" amphibian

(*Triturus carnifex*) and a "Vulnerable" bird (*Pyrrhula pyrrhula*) were also included".

A precisation has been added to **DISCUSSION**, *3rd paragraph*:

"Having population densities of all prey species throughout all study area would have allowed us to calculate killed prey selection, i.e., by comparing the total individual killed per species (i.e., the predation pressure) on the total population size for each species. Unfortunately, data on population density in the wild are limited particularly for small species such as reptiles, amphibians, non-migrant small birds and small mammals. The largest database of vertebrate abundance (Santini et al., 2018) only includes estimates of population density for 41 species and in few localities per species: in Italy there are over 780 species of terrestrial vertebrates, many of which live in hundreds localities. We are aware that our dataset is far from being complete, as confirmed by other species killed by cats outside our sampling period (the little bittern in 2019; the Bechstein's bat in 2013: Ancillotto et al., 2013); moreover we sampled a limited percentage of Italian free-ranging cats (and the number of prey killed by a cat in one year is only available for 21 cats). Therefore, as to the precautionary principle (Khayat et al., 2020), we are confident that impact occur particularly on K-strategy species (e.g., nocturnal mammals such as bats bats: Khayat et al., 2020) or species linked to transient habitats (e.g., Amphibians, crossing roads at night) and limited areas (e.g., islands), even if killed only occasionally. A high number of killings would also affect populations of Least Concern species, which represent indeed the majority of killings, possibly due to their abundance, particularly

if exerted by a non-native predator such as the domestic cat. Further research is needed to assess the actual local effect at population levels".

An addendum has been made to Data Availability Statement:

"The datasets used for analysis in this study can be found in online repositories [https://github.com/ drmarcogir/cats]. Photos, sensitive data and coordinates of owner's houses analyzed in this study are subject to

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- Santini, L., Isaac, N.J., Maiorano, L., Ficetola, G.F., Huijbregts, M.A., Carbone, C., and Thuiller, W., (2018). Global drivers of population density in terrestrial vertebrates. *Glob. Ecol. Biogeogr.* 27, 968–979. doi: 10.1111/geb.12758

the following licenses/restrictions [National Law 633/1941 and following integrations, DL 196/2003; General Data Protection Regulation – EU Regulation 2016/679] and cannot be shared also in line with assurance provided to citizen-scientists".

The authors apologize for these errors and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Tilman, D., Knops, J., Wedin, D., Reich, P., Ritchie, M., and Siemann, E. (1997). The influence of functional diversity and composition on ecosystem processes. *Science* 277, 1300–1302. doi: 10.1126/science.277.5330.1300

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