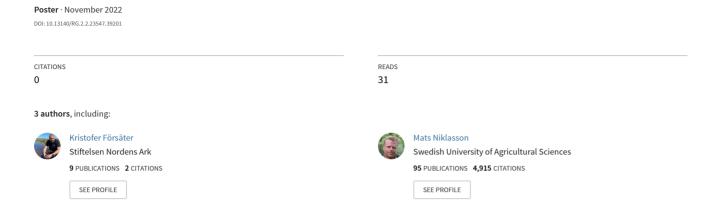
Citizen science project quickly improves knowledge on the rare cryptic European green toad



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(Bufotes viridis, Laurenti, 1768)

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Introduction

The European green toad (VU) is today almost extinct in Sweden and subject to several conservation initiatives including habitat restoration and reintroduction. It is well camouflaged and since males only vocalize during the mating season it is very difficult to monitor success of conservation efforts.

On the Baltic island of Öland in Southeast Sweden, reintroduction efforts of the endangered European green toad have been undertaken since 2003 but success has been very hard to verify, much due to behavioral traits, that makes the toad efficiently evade detection. Green toads have a crepuscular lifestyle, are well camouflaged and only audible in early spring from male mating calls. In this project we launched a citizen science project involving photographing of anurans in order to gather new info on presence of both common anurans as well as the rare green toad.

Results and discussion

Between April 14 and November 30, 2022, 57 verified observations with photos were reported to the project (table 1). Out of these, 14 observations were of green toads. Green toad observations were seemingly more common in the later part of the period than in the early and mid-part, coinciding with the peak of the tourist season on Öland (fig. 2). Throughout the day, green toad observations were slightly biased to afternoon and evenings, although our material is too small for further conclusions (fig. 3).

Compared to previous monitoring efforts for green toads, the 14 toads discovered in 2022 were considered a huge success. Earlier, focused searches for green toads were performed by trained personnel in spring and early summer of 2019 (10bs), 2020 (80bs), 2021 (10bs). Results from this project points to citizen science as an efficient approach to gather information also on presence of less visible species.

Method

A web based campaign was launched in April 2022 and was followed up by a press release, informational posters (fig. 1) and public lectures and presentations in areas of high interest during the course of the year. Geolocated photos of anurans were checked directly when received. All observations were reported to Artportalen (Swedish Species Observation System).



Species	Number of observations
Common toad (Bufo bufo)	32
European green toad (Bufotes viridis)	14
Agile frog (Rana dalmatina)	1
Unknown brown frog (Rana sp.)	10

Table 1. Verified species observations reported to the project.

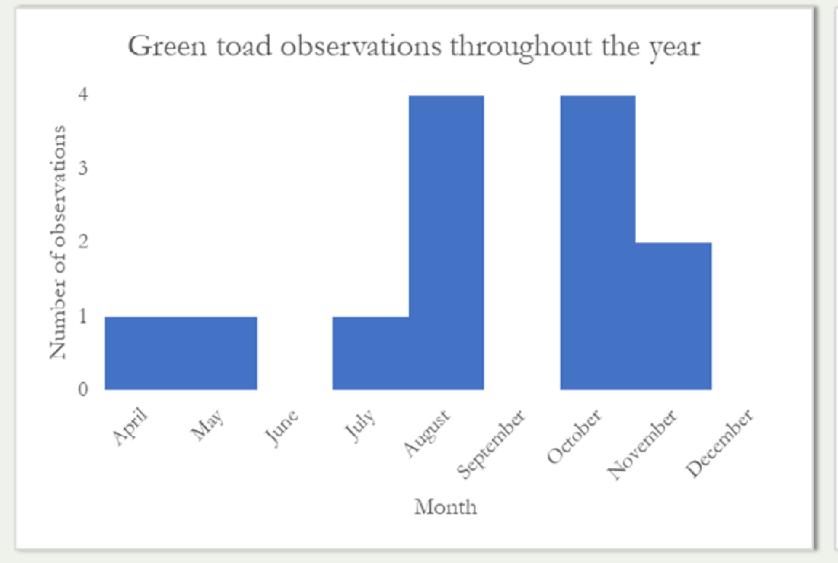


Figure 2. Verified observations of green toads reported to the project.

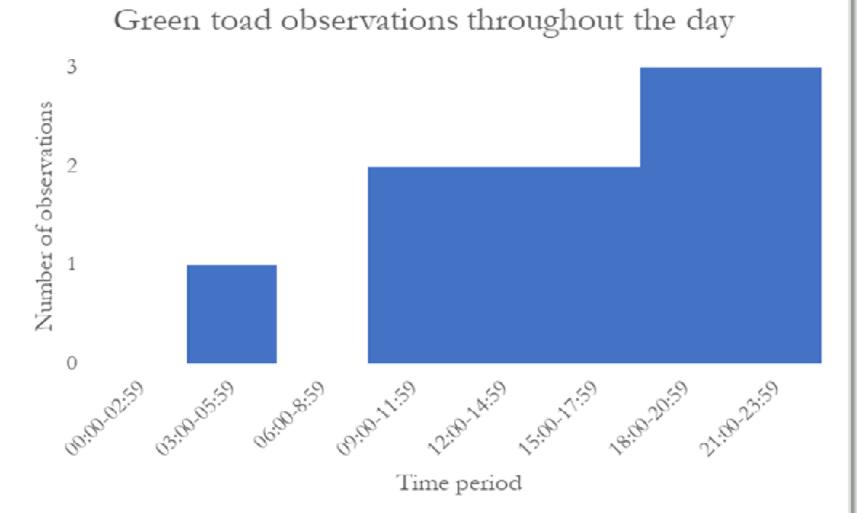


Figure 3. Reported observations of green toads range throughout the day.







