

# Bringing back Betzuca Torrentto life: The bird cages project



Eva Crespo, Neus Figols, Anna Junyent, Elena Dibarboure, Katherine Morel, Marta Díaz, Mar Fernández, Marta Sabaté, Sallatyel Carvalho, Albert Soto

IES Sant Quirze, Sant Quirzedel Vallès, Barcelona, Spain. E-mail: [crespo61@terra.es](mailto:crespo61@terra.es)

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## ABSTRACT

**A group of Spanish students observe birds in Betzuca Torrent and accordingly set up nesting boxes.**

One year ago, a group of 15-year-old students started a project with the following aims: To increase their knowledge about the natural system of the Galliners Hills and the Betzuca Torrent, to encourage their interest in nature, and to defend the town environment.

The relevance of this project comes from the fact that it is impossible to defend an environment without a deep knowledge about it. We had meetings every Tuesday at noon with our Environmental Educator (Neus Fígols) and our Biology and Geology teachers (Jordi Roldán and Xavier Juan). During the first sessions, we learnt about the ecological importance of the Galliners Hills as a biological connector between two Natural Parks, as well as its wealthy flora and fauna; unluckily, its environmental health is not very good. The group identified the main agents responsible for this situation: a forest fire in 1994 and anthropic pressure (such as extensive building). Then, we moved to the area of Betzuca Torrent to study the SQVnatura (Sant Quitzedel Vallès Natura) project, which is attempting to recover this fluvial space, where long ago migrant birds used to stop for a rest and drink water.

The first time we went to the hills we realized that the

trees were very young because of the 1994 fire. So, many birds such as tits (*Parus spilonotus*), the short-toed treecreeper (*Certhia brachydactyla*) [Figure 1], and the European scops owl (*Otus scops*) do not have enough holes to nest in.

Our task was then to install a number of bird cages to provide them with places to nest in and a night shelter for the cold winter nights. We focused on three tit species, little insectivore birds that we knew had, in previous years, used the bird cages to nest without problems.

We learnt how to identify the birds living in this area, how important they are for the environment, and how we could help with our bird cages project. We also studied the reproductive cycle of birds in order to decide the most suitable months to have the bird cages hanging in the trees of the forest. Our plan was to monitor the birds' activity around them. We focused mainly on physical aspects such as their size, feathers, eggs, and excrement: all of them are key clues in identifying signals of life around the cages.

During our first field trips, we had to learn how to work with the cages – how to hang them up and take

them down. We also had to decide the most suitable places to install them. Once we had decided on their locations, we recorded them with the help of a GPS device and identified each one with a number. During the breeding time (March-June), we monitored the activity in the cages. We tried to identify the presence of tits near the cages and we looked for excrement on the ground. We also took notes that could provide us with relevant information about the reproductive habits of these birds, as well as how successful the cages were in preserving this species in our area.

Once we had finished our first campaign, we felt very positive about it. We learnt a lot about the tits and the importance of their conservation for the health of the ecosystem. We also learnt to work as a team, to coordinate our efforts, and to be responsible with a project that is relevant to our community.

We enjoyed working in the field, a key activity for



Figure 1: Short-toed treecreeper [from <http://en.wikipedia.org/wiki/File:Boomkruiper1reversed.jpg>]



Figure 3: The bird's skeleton

science, and we hope this will contribute to our development as responsible citizens. Most of us are continuing with this experience and a number of new pupils have joined it this year. One of the main problems is that we think that 1 h per week is not enough and the fact that when the school term finishes, our activity as a group also stops.

## Tragedy in a Bird Cage – Who Killed the Little Tit?

In September 2010, we resumed our project. We were checking the bird cages [Figure 2] and describing what we found inside. We had already checked two bird cages that contained spectacular bird nests when we found a big surprise in the third one.

When we opened the door, we found a cadaver amongst the materials that birds used for building the nest. We could clearly see the skeleton of a little bird



Figure 2: Checking the bird nests



Figure 4: The spider

[Figure 3]. It was well exposed in a corner of the nest, just waiting for a forensic examination. We took some pictures of the scene and removed the nest for a future exhibition. When we were cleaning the bird cage to hang it up again, one of us screamed in panic, as people not familiarized with arachnids usually do when they see one of them. There it was! A spider of considerable size appeared and disappeared again intermittently while we were waiting patiently armed with a small defensive branch [Figure 4]. Finally, we saw it going out of the cage toward the protection of the ground. We took pictures of the spider and started hypothesizing about the dramatic death of the little bird in its bird cage.

We then did some research using the picture of the spider as a clue to try and identify it. We found a candidate (*Hygrolycosa rubrofasciata*) that we knew was a poisonous spider often found in this habitat.

We think the spider killed the little bird, but we want you to bring forward new information, new hypotheses, and new evidence we should look for to close the case of 'the little bird found dead in a bird cage.'

You can see a video of the spider at [http://www.youtube.com/watch?v=O\\_jcakrgq5Y](http://www.youtube.com/watch?v=O_jcakrgq5Y)

## About the Author

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**Eva Crespo** likes playing sports, reading and walking in the forest. She wants to be a scientist in the future.

**Jordi Roldán** likes sports, music and nature; he wants to be a science teacher.

**Anna Junyent** loves music, nature, and writes some stories for her school. She wants to be a film director.

**Marta Sabaté** loves music and she has always wanted to be a teacher.