



Israel - Tenshemet



Nestboxes are placed in high density
Photo: Kobi Meyrom

Barn Owls have been used as pest control agents of rodents in Israel since 1982. During the late 1960s, hundreds of birds of prey (some threatened and endangered species) were killed throughout Israel from secondary poisoning after eating rodents that had been poisoned with rodenticides. Israel is an important migration route for these birds, with 500 million birds migrating twice yearly.

In the 1980s a conservation plan that reduced the use of rodenticides and used birds of prey as part of biological pest control was devised. Barn Owls nesting boxes were set up in 1982 at Kibbutz Neot Mordechai in the Hula Valley in the hope of creating a Barn Owl population that could control the rodent populations. After a short time rodenticides were reintroduced to the fields, killing the Barn Owls and causing the project to be abandoned.

A year later, Kibbutz Sde-Eliyahu, located in the Great Rift Valley, 7 km from the city of Beit Shean and 30 km South of the Lake of Galilee was chosen as the replacement for Neot Mordechai. 14 Barn Owl nesting boxes and hunting perches were erected in strategic locations in and around the fields and plantations in order to establish a stable Barn Owl population. During the first couple of years there were many ups and downs. The first nest box design came from Europe and did not provide enough ventilation for the 40°C (and hotter) summers of the Beit Shean Valley. However, within a couple of years and after a few improvements to the nesting box designs, a population of Barn Owls was formed which has thrived.

The project is based on the addition of large numbers of nest boxes in farmland (typically 200-400 meters between boxes), a decrease in pesticide use, and creating a friendly environment for raptors. After integrating this project into first organic then non-organic farming practices, other farmers started placing nest boxes in the Valley and later in other parts of Israel.

Israel National Project:

Currently there are an estimated 1,000 nest boxes divided between 7 main regions in Israel, with plans to increase the size of the project to other locations in the future. In the

past the project was carried out by the farmers themselves, with little scientific influence, little analyzing of the breeding data and little scientific publication. 90% of nestboxes were added by the farmers for the purpose of biological pest control of rodents and only around 10% by conservationists and researchers. By monitoring the nest boxes using standardized methods, information will be gathered in order to increase the efficiency (nest boxes placement, etc.) of the applied pest control project.

In order to expand this project throughout Israel and increase the success of and coordination of existing nest boxes, a pilot of a national biological pest control project was started during the 2007 breeding season and hopefully a larger scale project will be established and implemented during the 2008 breeding season.

The project is led by the International Center for the Study of Bird Migration at Latrun, Tel Aviv University, the Israel Ornithological Center, and the Society for the Protection of Nature Israel and has national coordinators for the farming activities, scientific research, rodent monitoring and educational activities. The country was split into multiple regions, each of which will be under the supervision of regional coordinators. Monitoring methods include standardized nest box monitoring, ringing of nestlings and adults, rodent monitoring and pellet dissection. The project, which has limited funds, is funded by the Baracha Foundation, and hopefully will receive matching funds from the Ministry of Agriculture and Ministry of Environmental Protection who want to join the project as full partners.

Most conservation projects for Barn Owls place nest boxes over great distances; here nest boxes are placed in high density, sometimes as close as 30 meters. There are even fields that have 20 boxes spread 150 meters apart, of which around 50% are occupied by Barn Owls yearly. For example, the region with the most nest boxes, Beit Shean Valley, has 300 nest boxes in 90 km². During 2002- to 2007, 48% to 74% of those nest boxes were occupied (144 to 222 pairs yearly). In addition to nest boxes, another 30-40 pairs of Barn Owls breed in empty structures and date palms within villages so that there can be as many as 260 pairs breeding in 90 km² yearly. *(In the UK an area this size would normally hold between three and eleven pairs – Eds.)*

Cooperation:

Raptors such as Barn Owls move regularly between Jordan and the Palestinian Authority and are at risk of secondary poison from hunting there. Though Israel has extensive laws concerning the use of pesticides, enforcement and regulation is sorely lacking. The situation in the Palestinian Authority and in Jordan is much worse with inadequate laws and enforcement. Hunting and poisoning are significant causes of raptor population

decline throughout the world but especially apparent in the Middle East. Illegal hunting of birds of prey is widespread in this region. Owls are also considered a bad omen by many Muslims. Thus, an important goal of this project is to raise public awareness about the usefulness of raptors and the benefits of environmentally friendly agricultural practices.

Since 2002, the Jewish Community Federation of Cleveland has funded a project between Jordan and Israel. As part of this nest boxes were erected for the first time in Jordan in 2005. Out of the 22 nest boxes erected a total of 5 breeding attempts were recorded during the 2006 and 2007 breeding seasons. Preliminary studies of the diet of Barn Owls in Irbid, Jordan show that 91% of Barn Owl prey is made up of rodents. Jordanian farmers were initially worried about having Barn Owls on their farms, but after the success of the first two years those farmers who already have the boxes want more and new farmers are requesting boxes. The projects in both Jordan and the Palestinian Authority will expand during the 2008 breeding season as part of US-AID MERC research project in collaboration with Israel to determine how the farmers benefit from the raptors economically.

Education:

Posters and leaflets (written in Arabic and Hebrew) have been produced in Israel and distributed to local farmers, decision makers and the broader public. Educational campaigns targeting local communities of the benefits of owls accompany the project. As part of the Cleveland project, a poster produced in Israel was translated to Arabic for distribution in Jordan. The text had no mention of Israel in order to decrease possible friction with the local residents. As Barn Owls and Kestrels truly know no boundaries, they not only solve economic problems but are also bringing peoples together; something that is very needed in the Middle East.

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Project partners with Motti (holding one of the first Barn Owl nestlings to be raised in a nest box in Jordan)
Photo: Shaul Aviel