History of Seabird Conservation in Malta

John Joseph Borg, Senior Curator
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Some key dates

17 to early 19th Century
- De Soldanis to Roberts

1962
- First visit to Filfla

1968
- Formation of the Malta Ornithological Society

1969
- First visit to Filfla

1982
- Long-term study on the pelagic seabirds of the Maltese Islands

1988
- Yelkouan Shearwater colony at RtM discovered

2004
- Malta joins the EU

2006
- First EU funded Life project
Ghasfur ta Ghawdesc – *Thallassidroma melitensis*

MS of 1746

Cat Orn

1843
“This bird breeds all round the Maltese islands and the fishermen take their eggs and it is said, sell them as Hens eggs! They nest in the cliffs as well as under the herbage. We found them behind the herbage at the top of St. Paul’s Islands but they are chiefly on the southern side”. (1890s)
<table>
<thead>
<tr>
<th>Date</th>
<th>Species</th>
<th>Remarks (as written in Stenhouse’s letter to Jourdain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>03.04.1893</td>
<td>Yelkouan Shearwater</td>
<td>13 eggs – weighed 803–676grs [= grains] – average weight – 742grs, one fresh, others partly incubated. Measured – 2.32”–2.06” long by 1.62”–1.46” broad. Biggest egg 2.32” x 1.62” – Smallest 2.06” x 1.46”</td>
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<tr>
<td>30.06.1894</td>
<td>Scopoll’s Shearwater</td>
<td>22 eggs taken – 2 only were fresh probably others considerably incubated. 1 egg measured 2.9” x 1.9”</td>
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<tr>
<td></td>
<td>Storm-petrel</td>
<td>One egg hard sat. 100 grains, 1.15” x .84” – another infertile rotten – shell falling to pieces &amp; yet bird sitting on it.</td>
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<tr>
<td>31.03.1895</td>
<td>Yelkouan Shearwater</td>
<td>13 eggs – 2 fresh. Some far advanced in incubation. Measured – 2.42”–2.05” long by 1.64” to 1.56”</td>
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<tr>
<td>17.03.1896</td>
<td>Yelkouan Shearwater</td>
<td>70 eggs found – fresh</td>
</tr>
<tr>
<td>05.04.1901</td>
<td>Yelkouan Shearwater</td>
<td>9 eggs. All more or less incubated. Others were left as too incubated to blow. 3 eggs measured – 60x43 – 56x40, 55x41 millimetres.</td>
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<tr>
<td>26.05.1901</td>
<td>Yelkouan Shearwater</td>
<td>One egg very hardest. Many young in blue grey down – as big as adults</td>
</tr>
<tr>
<td></td>
<td>Scopoll’s Shearwater</td>
<td>Ten eggs found all fresh. Eggs 69 x 43 – 68 x 46. 67 x 47 – 65 x 45mm – My note says main body of P. kuhl will lay in about a week.</td>
</tr>
<tr>
<td></td>
<td>Storm-petrel</td>
<td>Egg quite fresh. 1.2” x .8” – found 4 pairs but only one egg – others ungetatable in holes.</td>
</tr>
<tr>
<td>Year</td>
<td>Calonectris diomedea</td>
<td>Puffinus yelkouan</td>
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<td>1954</td>
<td>Less than 30 pairs on Filfla.</td>
<td>Seen offshore in ones or twos or in small parties</td>
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</tbody>
</table>

No longer breeds on Malta.
1962
Formation of the Malta Ornithological Society

1965
Bird Ringing Group
Filfla islet
Filfla was still being bombed when the first visits were carried out.
Filfla – Sleepless nights

- Around 25,000 Storm-petrels have been ringed on Filfla.
Annual visits to monitor the breeding success of the Yellow-legged Gull *Larus michahellis* are also carried out to the island’s plateau.
Searching for new sites (1968-1969)
1975-1982
Systematic ringing of Scopoli’s Shearwaters in a site on the SE coast of Malta
1981 – A visit to a shearwater colony in the south of Gozo was the catalyst for initiating a self-funded study on the ecology and breeding biology of our seabirds was initiated.
A total of 155 Scopoli’s Shearwater nests found on Malta and Gozo were annually monitored.

Visits to the sites started in mid-February and ended in early November. Each study sites was visited once a week on average.
Calonectris diomedea
Longevity – 30+ years

Arrival at colonies – last 10 days of Feb.

Age of First breeding – 2\textsuperscript{nd} year in males
3\textsuperscript{rd} to 4\textsuperscript{th} year in females

Site Tenacity
Mate Fidelity
Incestuous behaviour
Philopatry

Incubation lasts 55 days

Low Breeding success

Fluctuating numbers in breeding population

Eggs and young susceptible to predation by rats and cats, adults killed by humans

Fledglings susceptible to excessive lights and sound
Puffinus yelkouan
Pre-Life studies (1968-2006)

• Between 1969 and 1984 3-5 annual visits were carried out to the largest colony situated on the NE coast of Malta.
• From 1985 onwards, regular visits were carried out.
• In September 2006 an EU funded LIFE Nature project was initiated.
Arrives at the colonies in October
Single egg laid (Feb-Mar)
Chicks hatch in May
Fledges (end of June – 3\textsuperscript{rd} week of July)
Colonies deserted August-September
Moult in surrounding waters
Young start to return back to the colony in their 2\textsuperscript{nd} year
High mortality rate
Low successful fledging
Eggs and chicks predated by \textit{Rattus rattus}
Re-occupy old abandoned nests if colony is predator free
Hydrobates pelagicus melitensis
Arrives in February and last young depart in early October

Extended egg laying season

Two breeding peaks

Long lived (27+ years)

Some movements by adults between colonies (Marettimo-Filfla)

Recoveries outside the Mediterranean: 1 at Cote Sauvage, Atlantic coast of France
1 washed on a beach in the Netherlands

Discovery of new colony in Gozo

Predation by Yellow-legged Gulls on Filfla

Highly susceptible to predation esp by Rattus sp.

Frequenting tuna-farms - supplementary food source
Long-lived birds require long-term studies
Annual population census

*Calonectris diomedea* – Breeding pairs in 2013

*Puffinus yelkouan* – Breeding pairs in 2013

*Puffinus yelkouan* breeding pairs

- Malta
- Gozo
- Comino
Tuna farms - a seasonal supplementary food source for storm petrels
Hydrobates pelagicus melitensis

John J. Borg
National Museum of Natural History, Vincent Pallone, Malta (John J. Borg et al.)

INTRODUCTION

The Tuna fishery in the Mediterranean is a well-established industry, contributing significantly to the economy of many coastal countries. However, the recent decline in catches has led to a need for alternative sources of food. In this context, tuna farms have been introduced as a potential solution. The farms are designed to provide a year-round supply of tuna, which can be harvested and sold. This has significant implications for the local economy and the environment.

RESULTS

The results of the study indicate a positive impact of tuna farms on the local ecosystem. The farms have been shown to support a diverse range of marine life, including storm petrels (Hydrobates pelagicus melitensis). The farms have also provided a valuable source of food for the local population, with catches exceeding expectations.

DISCUSSION

The study suggests that tuna farms can be a sustainable and viable alternative to traditional fishing methods. However, further research is needed to understand the long-term effects of these farms on the marine environment and the local economy.

CONCLUSIONS

The results of the study support the potential of tuna farms as a sustainable food source for storm petrels and a valuable economic opportunity for the local community. Further research is needed to refine the farming methods and to ensure their long-term viability.
Conservation Issues
2004 - Malta joins the EU

2007 - 1st LIFE project