Pygmy Cormorant (Phalacrocorax pygmeus) nesting in Israel

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Background

Pygmy cormorants (*Phalacrocorax pygmeus*) were once a common wintering species in Israel, but they were extirpated in 1960 following loss of wetland habitats and escalating conflicts with fish-farmers in the budding aquaculture industry. In 1974 they began to reappear during winter migration in small numbers, and in 1982 the first nesting pair was recorded in Israel. Over the following two decades the number of migrating and resident birds gradually increased. In spring 1998 there were only 60 nests in Israel, whereas by the following year (1999) they had increased to 100. There were concomitant increases in conflicts with fishpond managers as damage to pond yields escalated, especially in the Bet Shean Valley where there are approximately 1,600 ha of freshwater fishponds.

The Management Program

In fall 1999, the Nature & Parks Authority instituted an organized management program in cooperation with the fish farmers to reduce the damage and to protect this endangered species. The program consisted of non-lethal harassment (with pyrotechnics) of pygmy cormorants throughout the fall and winter at roosting sites near fishponds in the Bet Shean Valley. This activity was aimed at inducing them to translocate, before the spring nesting season, away from the Bet Shean Valley to alternative roosting sites some 20 km away on the shore of the Sea of Galilee (Lake Kinneret), where more "natural" fish prey is available.

Success of the translocation program

The translocation program was partially successful in its first year. By spring 2000 the pygmy cormorants had established 70 nests at two nesting sites around the Sea of Galilee, and there were another 40 in a small nature reserve in the Bet Shean Valley. The program continued with greater success through winter 2000-2001. In the spring 2001 nesting season, they established 5 nesting sites with 115-150 nests (Table 1), but only about 20% of them were in the Bet Shean Valley (Table 2).

These numbers show that the translocation program did not harm pygmy cormorant nesting, but actually facilitated its increase. This successful program used non-lethal methods to translocate a rare avian species, thereby benefiting its conservation by reducing the conflict between these piscivorous (fish-eating) birds and the fish-farmers.

Table 1. Number of nests counted at each nesting site (Spring 2001)

Site	**UTM coordinates**		**Number of nests**
	Latitude	Longitude	
1. The Hula Valley			
1.a. Gomeh Junction	674	740	15-20
1.b. Hula Nature Reserve	663	743	5-10
2. The Sea of Galilee (Lake Kinneret)			
2.a. Ginnosar	638	737	35-40
2.b. Ha'on	627	747	35-50
3. The Bet Shean Valley			
3.a. Tirat Zvi	585	740	25-30
Total			**115-155**

Table 2. Multiyear comparison of pygmy cormorant nesting in Israel

Year	**1998**	**1999**	**2000**	**2001**
No. of nesting sites	1	2	3	5
No. of nests	60	100	110	115-155
Percent of the nests in the Bet Shean Valley	100	82	44	19-22