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GEOGRAPHICAL REVIEW OF THE HISTORICAL AND CURRENT STATUS OF OSPREYS (PANDION HALIAETUS) IN UTAH

Clark S. Monson

ABSTRACT.—Small numbers of Ospreys (Pandion haliaetus) are known to have nested historically in Utah. A precise baseline figure is unavailable, but the 19th-century Osprey population in Utah probably consisted of at least 15 breeding pairs scattered in 4 geographic regions. Human persecution is believed to have caused the abandonment of nesting territories along the Wasatch Front and in the western Uinta Mountains by 1900 and 1960, respectively. Osprey populations in the southern plateaus and Green River areas, however, began increasing in the late 1970s. Several recent nesting attempts and numerous summer sightings at nontraditional and abandoned historical sites in Utah suggest the Osprey is also expanding its range in Utah. High productivity for local pairs and long-range dispersal from more northerly Osprey populations are discussed as sources for the current surge in Utah’s Osprey population, which now consists of approximately 35 breeding pairs.

Key words: Osprey, Pandion haliaetus, raptor, Flaming Gorge Reservoir, dispersal.

The Osprey (Pandion haliaetus) is one of the most widely distributed species of raptors during the breeding period. The extent of its cosmopolitan range is exceeded by only 2 other raptors: the Peregrine Falcon (Falco peregrinus) (Cade 1982, del Hoyo et al. 1994) and Barn Owl (Tyto alba) (Marti 1985, Eckert and Karalus 1987). Despite the Osprey’s broad geographic distribution, local populations occur in fragmented and low densities in much of the species’ range (Bent 1937, Palmer 1988, del Hoyo et al. 1994). This scenario holds true for most of the intermountain region of the western United States (Henny 1986, Johnsgard 1990). In Utah, Osprey distribution has been particularly limited. Recently, however, several personal summer observations of Ospreys over 140 km from known breeding pairs prompted an investigation into the possible occurrence of Ospreys at other nontraditional Utah localities.

A survey of individuals from the U.S. Forest Service, Utah Division of Wildlife Resources, Utah State Parks, and other persons familiar with Osprey ecology was conducted during 1994–95. The survey revealed many Osprey sightings and several nesting attempts between 1 June and 15 August at numerous lakes, reservoirs, and rivers from nearly every region of the state since 1990. These sightings represent the first widespread effort by Ospreys to expand their range in Utah. This paper reviews historical Osprey breeding territories in Utah, subsequent population declines, and current Osprey population and range expansion in Utah.

GEOGRAPHIC HISTORY OF THE OSPREY IN UTAH

Nesting Ospreys have been reported from 4 geographical areas of Utah (Fig. 1): the Wasatch Front, Uinta Mountains, southern plateaus, and Green River (Table 1). Accounts of early ornithologists, naturalists, and egg collectors indicate the Osprey was a regular summer resident and breeder in Utah. Allen (1872) found them along the Great Salt Lake marshes west of Ogden, and Hensbaw (1874) saw them at Utah Lake near Provo. Neither discussed nest observations in these areas, but R. G. Bee (unpublished ornithological notes) mentioned that Ospreys formerly nested along the shores and tributaries of Utah Lake (Fig. 1; Table 1, region A).

Other records were for the Uinta Mountains (Fig. 1; Table 1, region B). J. D. Daynes (unpublished ornithological notes) described the repeated use of an Osprey nest from 1915 to 1938 on the Weber River, 20 km east of Oakley, Summit County. Also, Hayward (1931)
Fig. 1. Known historical distribution of nesting Ospreys in Utah: A. Wasatch Front; B. western Uinta Mountains; C. southern plateaus; D. Green River.

surveyed (8 July–21 August 1930) birds in the western Uintas where Summit, Duchesne, and Wasatch counties converge. While not giving actual locations, he said a few Ospreys nested in the Mirror and Tryol [sic] lakes region. Bee and Hutchings (1942) specifically cite Mirror and Trial lakes as having Osprey nests. Twomey (1942: 382) visited an occupied nest between 16 and 20 July 1932 at the north end of Mirror Lake, “Wasatch County.” This nest was actually
Table 1. Nesting populations of Ospreys in Utah.

<table>
<thead>
<tr>
<th>Region</th>
<th>Historical pairs</th>
<th>Current pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Wasatch</td>
<td>Unknown</td>
<td>1</td>
</tr>
<tr>
<td>B: Uinta Mountains</td>
<td>5-8</td>
<td>0</td>
</tr>
<tr>
<td>C: Southern plateaus</td>
<td>2-4</td>
<td>8-11</td>
</tr>
<tr>
<td>D: Green River</td>
<td>6-8</td>
<td>20-25</td>
</tr>
</tbody>
</table>

in Duchesne County and perhaps the same nest Hayward et al. (1976) referred to when they listed Wasatch County as a former nesting area. R. G. Bee (unpublished ornithological notes) also cited single pairs at Fish, Scout, and Lily lakes in the western Uintas. On 23 May 1945, Bee recorded that a game warden in Duchesne informed him of 2 pairs at Moon Lake and another pair at an unidentified Uinta lake.

Other early observers of Osprey nests in Utah include Wolfe and Cottam (Hayward et al. 1976), who, along with Bee and Hutchings (1942), saw Ospreys nest at Fish Lake (not the Uinta Mountains lake with the same name), Sevier County, beginning in 1928 (Fig. 1; Table 1, region C). On 18 July 1936, R. G. Bee (unpublished ornithological notes) visited the Fish Lake nest. A local rancher told him Ospreys had used that particular nesting site for at least 20 years.

Behle et al. (1958) noted a pair of Ospreys in southwestern Utah at Navajo Lake, Kane County, on 17 and 18 June 1950 (Fig. 1; Table 1, region C). This particular territory (and an additional site at nearby Panguitch Lake, Garfield County) has been used regularly since Behle’s discovery (Eyre and Paul 1973, Salt Lake Tribune, 13 August 1978, Walters 1981, Anonymous 1989).

Ospreys also nested along the Green River, northeastern Utah (Fig. 1; Table 1, region D). On 23 and 24 July 1959, C. M. White and C. Bosley (White and Behle 1960) located 2 nests along this river in Horseshoe Canyon, Daggett County. Both nests contained 2 young. An additional nest was discovered on the Green River in Uintah County by M. Horton in June 1974 (Behle 1981). White (1969) suggested the total population of Ospreys nesting along the Green River probably consisted of 6-8 pairs.

**STATUS**

**Historical Events**

Although numerous records of Ospreys nesting in Utah exist, these birds have apparently undergone 2 separate declines. The 1st decline involved Ospreys nesting along the Wasatch Front (Fig. 1). During winter 1848-49, depredations upon livestock, poultry, and grain led to a much-publicized contest to kill the “wasters and destroyers” (Arrington 1958: 51). Hundreds of mammalian predators and thousands of raptors were killed (Arrington 1958). Ospreys would have been on their southern wintering grounds during this assault on local predators, but the incident suggests that early pioneers in Utah treated all carnivores and birds of prey with contempt. Other similar hunts followed, and 40 years later the Utah Legislature implemented a law awarding bounties for the killing of predators (Rawley 1985). Rewards were available for several species of fish-eating birds including Ospreys. The destruction that this bounty inflicted upon fish-eating birds in the name of “conservation” was significant and is vividly described by Pritchett et al. (1981).

The attitudes of early residents toward predators, coupled with laws encouraging their destruction, may have led to the Osprey’s extirpation from the Wasatch Front (Fig. 1; Table 1, region A) around the turn of the century. In 1935, R. G. Bee (unpublished ornithological notes) speculated that human persecution caused the abandonment of Osprey nests near Utah Lake. Bee did not record when these Ospreys disappeared, but his manner of reflection on their absence suggests the loss occurred well before his 1935 notation.

The 2nd period of Osprey decline occurred in the western Uinta Mountains (Fig. 1). The Uinta Mountain nests that Daynes, Bee, Hayward, and Twomey reported were observed before, but apparently not after, the 1950s and 1960s when Osprey colonies along the eastern seaboard were decimated by organochlorine compounds (Palmer 1988, Poole 1989). Although the impact of synthetic agricultural biocides upon Ospreys in Utah is unknown, Ospreys in other areas of the western United States were generally less affected by environmental contaminants than eastern populations (Poole 1989, White 1994).

Another possible reason for the decline of Ospreys in the Uinta Mountains is indiscrimi-
nate shooting resulting from a hostile attitude by local residents (Bee unpublished ornithological notes, Twomey 1942). Many Ospreys were formerly shot at northern Utah fish hatcheries during spring migrations (White 1969, Hayward et al. 1976), and some of these casualties could have been local breeders. Hayward et al. (1976: 66) recorded the Osprey was “formerly a sparse but regular summer resident in Utah; now greatly reduced in numbers and considered to be rare and endangered.” They preface their discussion of birds in Utah by stating they have included all records concerning rare species in the state. However, they cited Ospreys only in the western Uintas and records for Fish Lake in Sevier County. They did not include information on the 1 or 2 pairs nesting in the Navajo Lake–Panguitch Lake area, southern Utah, or the pairs at Flaming Gorge Reservoir, northeastern Utah. In the same year (1976) that Hayward et al. (1976: 66) described the Osprey as “greatly reduced,” more Ospreys (6 pairs) nested at Flaming Gorge Reservoir (Wagner 1977, Salt Lake Tribune, 13 August 1978) than had been recorded in any particular year in the western Uinta Mountains.

Current Events

Flaming Gorge Dam on the Green River was completed in 1964 and created a narrow, 150-km-long reservoir on the Utah-Wyoming border. The Osprey population here remained relatively stable until the late 1970s and 1980s when an increase was noted (Behle 1981). Crawley and White (1989) found 21 pairs and 1 trio of Ospreys at Flaming Gorge in 1989. Of these, 15 pairs succeeded in fledging 37 young. Osprey numbers at Fish Lake in Sevier County increased from 2 pairs in 1989 (Anonymous 1989) to 6 in 1993 (B. Lowry, U.S. Forest Service, personal communication). Additionally, 1 or 2 pairs now nest 3 km away at Johnson Valley Reservoir (P. Wagner personal communication). Other current Osprey nest sites at traditional waters in Utah include 2 pairs in the Panguitch Lake–Navajo Lake area of southern Utah (Anonymous 1989).

In 1990 a pair of Ospreys nested at Tropic Reservoir, Garfield County (Sorensen 1990). This site is 20 km east of region C (Fig. 1, Table 1) and should be regarded as a geographical extension of that area. In 1994 a pair of Ospreys constructed a nest near the Midway fish hatchery, Wasatch County (Fig. 2A). In 1995 a 2nd pair built a nest 2 km away at Deer Creek Reservoir on a 5-m-high artificial platform erected for Ospreys (Fig. 2B). Deer Creek Reservoir and the adjacent Midway fish hatchery have been frequented by Ospreys during spring migrations for many years (Behle and Perry 1975). Additional Osprey nesting attempts in 1995 include 1 pair at Jordanelle Reservoir, Wasatch County (Fig. 2C), and another pair near Highland, Utah County (Fig. 2D). Incubation behavior at the latter site was observed for approximately 2 wk before strong winds destroyed the nest. This site was possibly the first Osprey nest along the Wasatch Front in 80–100 yr.

The origin of Ospreys colonizing new waters in Utah is currently unknown, but their reluctance to disperse more than 125 km from their natal sites is well documented (Henny 1986, Poole 1989). Reproduction for nests at Flaming Gorge Reservoir is generally high (Crawley and White 1989), and considering the Osprey’s pronounced philopatry, one might expect that Ospreys at new locations in Utah derive from this local population. While high productivity has augmented the Osprey population on Flaming Gorge, the frequency with which Ospreys are being witnessed in Utah is too great to be the sole result of dispersal from that reservoir. Moreover, if Flaming Gorge were the primary source of Ospreys pioneering new waters in Utah, one would expect lakes and rivers near that reservoir to be the initial areas of range expansion. This has not been the case.

A more plausible source of Ospreys attempting to colonize nontraditional (and abandoned historical) waters in Utah is from spring migrants stopping short of their natal territories farther north. Osprey populations in Idaho and Wyoming number in the hundreds of pairs (Henny 1986, Poole 1989), and Osprey counts made at several migration points in the West have burgeoned since 1983 (Hoffman et al. 1992). Furthermore, migrating subadult Ospreys are known to linger sometimes and even remain at productive foraging sites south of their traditional breeding grounds (Swenson 1981, Poole 1989). These lingering individuals may represent young adults without an established history of breeding elsewhere.

If more northerly populations constitute the primary source of Ospreys currently pioneering nontraditional waters in Utah, this long-
Fig. 2. A, Osprey nest, Midway fish hatchery; B, Osprey nesting platform and nest, Deer Creek Reservoir; C, Osprey nest, Jordanelle Reservoir; D, Osprey nest and incubating adult near Highland, Utah.
distance dispersal is a recent phenomenon and possibly indicates a saturated breeding population in the northern Intermountain West. A current, quantitative evaluation of Osprey populations in Idaho and Wyoming and extensive banding efforts in these states could help determine if this speculation is correct. Until such a project is undertaken, the origin of Ospreys presently colonizing new waters in Utah is open to conjecture.

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**LITERATURE CITED**


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