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First Nesting of Cooper's Hawk (*Accipiter cooperii*) in New York City Since ca. 1955

Robert DeCandido

Hawk Mountain Sanctuary, Acopian Center for Conservation Learning,
410 Summer Valley Road, Orwigsburg, Pennsylvania 17961
rdcny@earthlink.net

Deborah Allen

P.O. Box 1452 Peter Stuyvesant Station
New York, N.Y. 10009
DAllenyc@earthlink.net

Interest in urban nesting raptors in New York City has increased in the last 20 years with the successful re-introduction of the Peregrine Falcon (*Falco peregrinus*), and the project to restore the Eastern Screech-Owl (*Megascops asio*) to Central Park (DeCandido and Allen 2002). The publication of articles and books about urban raptors has also made people aware of these birds in cities (Herbert and Herbert 1964, Frank 1994, Bird et al. 1996, Uscher 2002). Similarly, there is growing interest in the New York City environment, especially historical and ongoing research in the area (see Bicknell 1878, Pouyat and McDonnell 1991, DeCandido and Allen, in press).

Cooper's Hawk (*Accipiter cooperii*) is a mid-sized diurnal raptor that preys primarily upon birds and occasionally on small mammals. In eastern North America, this species declined significantly in the 1940s through the 1960s due to a combination of shooting, pole-trapping, and pesticide contamination (Meng 1951, Henny and Wright 1972). As recently as the 1980s in the eastern United States, Cooper's Hawks were classified as being extirpated, endangered, threatened, or a species of special concern in 16 states (Tate 1986, Mosher 1989), and a rare breeder in Massachusetts in the early 1990s (Veit and Petersen 1993). Data from fall hawk migration counts in the northeastern United States suggest that this raptor is on the increase (Bednarz et al. 1990, Walter 1994, 1995). In New York State in the 1990s, Cooper's Hawks were found breeding in all parts of New York State except New York City, Long Island, and Rockland and Niagara Counties (Marsi and Kirch 1998). By summer 2002, the Cooper's Hawk was confirmed as a breeding species in at least three breeding bird census blocks on Suffolk County, Long Island (K. E. Feustel 2002, pers. comm.). In this paper, we present the first evidence of nesting Cooper's Hawks in New York City since ca. 1955.

Nesting records from New York City, 1999-2003

Since 1999, two pairs of nesting Cooper's Hawks have been found in New York City: Staten Island (Richmond County) in 1999 (Section of Natural History 2000), and in Bronx County in 2001-2003. The Cooper's Hawk nest on Staten Island was discovered in a sassafras (*Sassafras albidum*) tree approximately 11 m high in High Rock Park. The female was in adult plumage, while the male was in first-year (brown back) plumage. One young bird is believed to have fledged in July, and no Cooper's Hawks were seen in the nest area after 11 August 1999 (R. Matarazzo pers. comm.).

In the Bronx in 2001, the Cooper's Hawk nest was built approximately 11 m high in a non-native Tanyosho or Umbrella Pine (DBH = 36.5 cm), a cultivar of the Japanese Red Pine (*Pinus densiflora*). The female was in first-year (brown back) plumage and the male was in sub-adult plumage. The nest was located in a group of six conifers approximately 60 m from contiguous forest in Bronx Park. The habitat immediately surrounding the nest site was manicured lawn with well-spaced trees, interspersed with pedestrian pathways. Small, down-covered chicks were first seen on 5 June (A. Block pers. comm.), suggesting that the eggs were laid approximately 20-25 April 2001. (See nesting cycle details in Rosenfield and Bielefeldt 1993.) Fledging occurred on 6 July. The brood consisted of two females and a male. After the nesting cycle was completed, both adults remained on territory and did not migrate during the fall and mild winter of 2001-02.



Fig. 1. Juvenile Cooper's Hawks 12 July 2001, six days after fledging. Bronx Park, Bronx Co., NY © Deborah Allen.

In 2002 and 2003, Cooper's Hawks nested in a non-native Korean Pine (*Pinus koraiensis*), about 9.5 m high and 3.5 m below the canopy in Bronx Park. The nest tree (DBH = 42.5 cm) is part of a loose collection of native and non-native conifers approximately 125 m from any tract of contiguous forest. Spacing between the nest tree and other nearby pines ranged from 5 to 15 m. Compared to 2001, the nest site used in 2002 and 2003 was located in an area that received much less foot traffic by the public, and no tram passed nearby. In both 2002 and 2003, successful fledging was approximately one week earlier than 2001, and more young fledged (five in 2002; four in 2003) compared to 2001. We believe that the parent hawks were the same birds in all years.

In 2004 and 2005, no nesting or resident Cooper's Hawks could be found in Bronx Park. Several factors may have contributed to abandonment of the nest including (a) extensive construction of buildings approximately 50 meters from the nest site in 2003; (b) pruning the canopy of the nest tree in autumn 2003.



Fig. 2. Cooper's Hawk "brancher" 28 June 2002. Bronx Park, Bronx Co., NY © Deborah Allen.

Discussion

E. P. Bicknell provided the first record of nesting Cooper's Hawks in New York City (Riverdale; Bronx County) in 1883 (cited in Griscom 1926). In the 20th Century, Griscom (1923) wrote that the Cooper's Hawk was "no longer nesting [in the New York City region] except possibly in northern Westchester County." Kuerzi (1926), recording the observations of the members of Bronx County Bird Club, listed this species only as a fairly common fall migrant in the New York City area.

Cruickshank (1942) documented two nests on Staten Island in the late 1930s and early 1940s. He considered this species a fairly common breeder in rural areas just outside of New York City. Siebenheller (1981) wrote that nesting Cooper's Hawks were first recorded on Staten Island in 1933, and found for at least eight years thereafter in the same locality; another nest was found the following year (1942) in a different location on Staten Island. P.A. Buckley (2001 pers. comm.) found several nests from 1951-55 in the Croton Aqueduct woods of Van Cortlandt Park in Bronx County. By the early 1960s, Bull (1964) wrote that the Cooper's Hawk was "a fairly common breeder" in the metropolitan region, but provided no specific information on the location of nests in the New York City area.

In other areas of the United States, Cooper's Hawks have been recorded as a nesting species in urban areas (see Stahlecker and Beach 1979, Boal and Mannan 1998, Rosenfield and Gissibl 2000). According to researchers familiar with nesting Cooper's Hawks in the northeast, the use of an old crow or squirrel nest as a foundation is not uncommon, and brown plumage (first-year) females typically use an existing structure of some kind. First-year females are far less secretive than adult females, and more likely to nest in proximity to people in the northeastern United States (L.J. Fischer, Jr. 2002, pers. comm.). Information in published studies indicates that adult female Cooper's Hawks fledge more young several days earlier than first-year females (Boal 2001). In some populations of urban nesting Cooper's Hawks, pairs will nest closer together than their forest counterparts, and produce more offspring as well (Rosenfield and Gissibl 2000). In the New York City region, the population of this raptor seems to be on the increase: a sub-adult male Cooper's Hawk was a parent at the Staten Island nest in 1999; a sub-adult female was a parent at the Bronx nest in 2001; and in 1993, both parents at a Westchester County nest were in sub-adult plumage (Rothstein 1993).

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