FIRST EXPERIMENTS WITH CAPTURING GOLDEN EAGLES BY HELICOPTER

By David H. Ellis

Golden Eagles (*Aquila chrysaetos*), especially immatures, sometimes congregate near concentrations of domestic livestock. Regardless of whether the birds are feeding on carrion or live animals, in some instances it is wise to disperse the birds.

A concentration of ca 50 Golden Eagles on a lambing area in Montana in 1974 provided the stimulus for developing a suitable means of capturing and removing the birds. Conventional scare techniques (small explosive rockets) failed to disperse the eagles, and bait-trapping yielded only three birds in three weeks. Other raptor trapping techniques (dho gazza, bal-chatri, bow nets, etc., Beebe and Webster, 1964) are probably not suitable for procuring many eagles in a short time.

Two observations suggested that a helicopter could be a useful tool in capturing eagles. First, the Senate hearings on predator control in 1971 revealed that eagles could be efficiently approached (and shot) from rotary winged aircraft. Second, nestlings and recently fledged Golden Eagles when threatened sometimes Head-down-crouch rather than flee from approaching humans (Ellis, 1973). I sought to find out if fully fledged birds and adults could also be intimidated into crouching by threatening them with a helicopter.

METHOD AND RESULTS

The area chosen for the helicopter capture experiment consisted of rolling prairie interspersed with rocky hills in Lewis and Clark County, Montana (elevation ca 1,400 m). The area was familiar to air and ground personnel, and Golden Eagles were present but scattered.

The pursuit craft was a 3-passenger Bell 47 G-3B helicopter, manned by an experienced pilot. A ground pursuer equipped with gauntlets and welders' sleeves rode in the aircraft. A truck followed the aerial activities and carried fuel for the aircraft.

The first pursuit began at 0945 on 22 July 1974. By 1130, four eagles had been captured, examined, weighed, banded and released. The day was clear and calm initially, but a 5-10 knot east wind developed toward the end of the experiment. Details of each capture follow.

Eagle No. 1. Age - 2 years; weight - 4,800 g; crop - ca 300 g. The bird made approximately five (30-100 m) flights with the aircraft 15-20 m overhead. The bird then performed Head-down-crouch; the aircraft lit out of sight ca 70 m away; the craft assumed a position 10-15 m above the eagle, and the pursuer rushed the eagle grasping its tarsi as it rose to flee. Approximately five minutes elapsed from approach to capture.

Eagle No. 2. Age - ca 3 years; weight - 4,625 g; crop - empty. This bird crouched shortly after our approach, but it detected the pursuer on the ground and reflushed, thus prolonging capture time to 15-20 minutes. It made several long flapping flights (.5-1.5 km each) before approaching the truck, crouching, and being captured by ground personnel.

Eagle No. 3. Age - 1 year; weight - 4,025 g; crop - empty. Capture was as described for eagle no. 2. The bird twice rose from a crouched position below aircraft after detecting pursuers on ground. Time from first approach to capture was ca 15-20 minutes.

Eagle No. 4. Age - adult (probably over 5 years); weight - 3,450 g; crop - empty. This bird lacked one foot and tarsus and showed excessive plumage wear. Although it was fully capable of flight (as evidenced by its behavior upon release), it immediately crouched below the helicopter and was captured within five minutes of initiation of pursuit.

In addition to the four captured birds, which were perched when first observed, four soaring birds were pursued. Two of these might have been captured if pursuit had been continued. Once birds were aloft and aided by thermals, they could, at least temporarily, avoid capture, but because perching birds were available, there was no need to pursue soaring eagles.

DISCUSSION

Even though the technique described above has not been fully developed, I have presented it here so that others may benefit from the idea and consider it as a possible device in raptor studies and in removing unwanted eagle congregations.

Some will doubt the wisdom of publicizing a technique for capturing eagles, but inasmuch as (1) it has already been widely publicized that eagles can be shot from helicopters (U.S. Senate, 1971) and (2) conventional techniques are unsuitable for dispersing congregations of eagles, it now seems appropriate to publicize an alternative that can satisfy both angered wool growers and concerned conservationists.

From the initial field trial of this technique, several generalizations surface. The four eagles were captured because of their tendency to land and crouch when harrassed by the helicopter, not because they were forced out of the air by the downwash of the rotor. Crouching birds can be approached without flushing them, either by rushing them from behind, or by using screening vegetation. Winds should be avoided, because in high winds eagles are hard to approach and rotary winged aircraft are less manageable. Thermals present fewer problems because perching birds can be captured before they have an opportunity to rise on thermals. Soaring birds probably cannot be efficiently captured by means of a Bell 47 G-3B helicopter.

Because four perched eagles were readily captured in less than two hours on the first attempt with this technique, I believe it will

prove useful in studies where it is necessary to capture individual or large numbers of eagles. The technique will probably also be applicable to other species.

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