

THE ABA: A DEVICE FOR RESTRAINING RAPTORS AND OTHER LARGE BIRDS

THOMAS L. MAECHTLE

*Raptor Research Center
Boise State University*

1910 University Avenue, Boise, Idaho 83725 USA

Abstract.—The search for effective methods to restrain raptors and other large birds has been an ongoing challenge for researchers. Biologists have devised methods for holding birds by adapting modern technologies, such as synthetic hosiery, Vetrap (a self adhesive tape used by veterinarians), and even metal cans. This paper describes an ancient method of restraint—the ABA—and points out the advantages for its use on birds by modern ornithologists.

EL ABA: UN APARATO PARA RESTRINGIR RAPACES Y OTRAS AVES GRANDES

Sinopsis.—La búsqueda de métodos adecuados para restringir el movimiento de rapaces y aves grandes ha sido un reto para los investigadores. Aprovechando la tecnología moderna, los biólogos han desarrollado métodos utilizando fibras sintéticas, vetrap (cinta adhesiva especial utilizada por veterinarios) y hasta envases o cilindros de metal. En este trabajo se describe el antiguo método de uso del ABA y se indican las ventajas del mismo.

Safe methods of restraint for captured raptors are of primary concern to researchers involved in banding operations. Common techniques for restraint include the use of metal cans (Hamerstrom 1984), Ace bandages, cloth or synthetic stockings (Bloom 1987), and Vetrap (Fuller 1975). Although these are convenient, they have limitations. For example, when using a metal can a raptor has to be removed from the can and held by one person while morphometric measurements or blood samples are taken by another. Cans are not well ventilated and may become unsafe

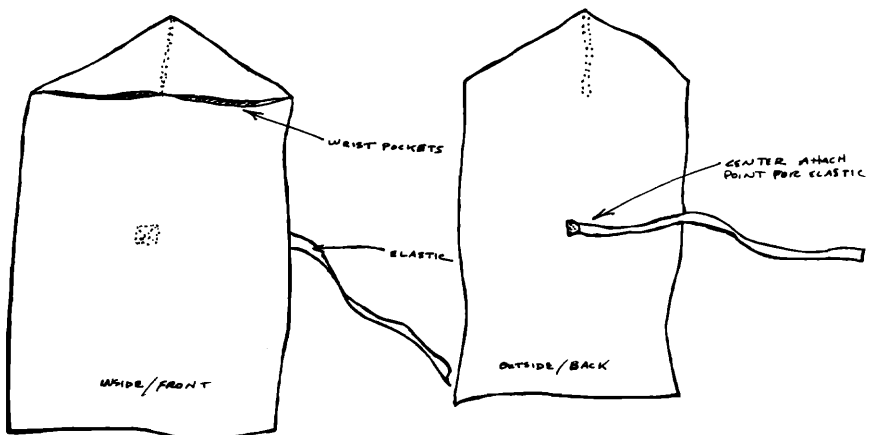


FIGURE 1. The ABA is made from a rectangle of cotton cloth, with wrist pockets folded and sewn at the top, and an elastic tape sewn on the back.



FIGURE 2. Proper way of holding a raptor while inserting the wrists into the Aba.

in warm temperatures. Stockings ruffle the plumage, causing captured birds to spend extensive time preening after release. Ace bandages and Vetrap can be applied too tightly, restricting free breathing and causing overheating.

The Aba is an alternative to the methods described above. Used properly, it restrains a raptor without contacting or restricting the head, breast or abdomen. This allows the bird to breathe freely and does not damage the plumage. The Arabic word *Aba* means cloak; other accepted spellings include *Abba* and *Abbah* and the plural *Abbi* (Dickson 1949). A similar method of restraint is used by Chinese ornithologists (M. Fuller, pers. comm.). These devices have most likely been used on raptors in the Orient and Middle East for thousands of years.

The modern Aba is made from rectangular cotton cloth, 300 × 550 mm, (for medium-size raptors, such as female Peregrine Falcons, *Falco peregrinus*, and Swainson's Hawks, *Buteo swainsoni*) into which wing-butt pockets are stitched. A strip of elastic tape (20-mm wide by 600-mm long) is sewn onto the back of the cloth, and is wrapped around the bird's tarsi

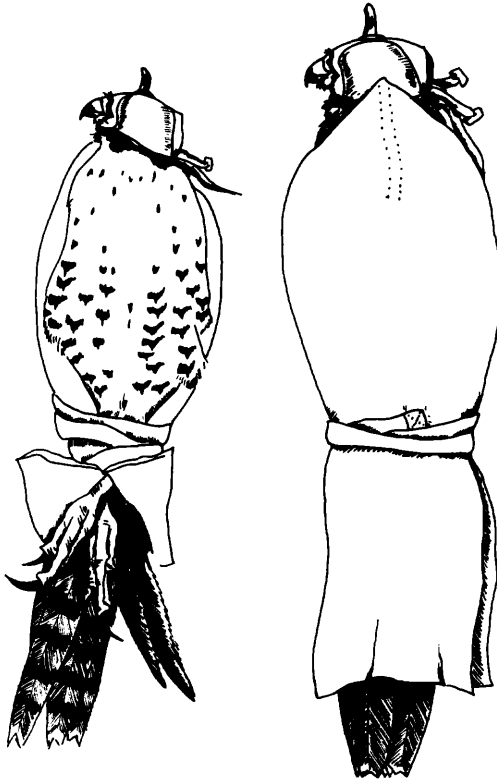


FIGURE 3. Front and back views of fully restrained raptor in Aba. Note how elastic tape holds tarsi, and winds around back.

(Fig. 1). Abas can be made larger or smaller depending on the size of the species to be restrained. The Aba has been used on birds other than raptors, including large corvids, such as Common Ravens, *Corvus corax* (J. Marzluff, pers. comm.). It is likely that the Aba could be adapted to a variety of large birds.

Upon capture, a raptor should be hooded to help reduce stress (Beebe and Webster 1964). The birds' wrists are slipped into the pockets of the Aba (Fig. 2). The wrists are snugly fitted into the wing pockets, and then the elastic tape can be wrapped firmly around the tarsi and tied in place (Fig. 3). If necessary, masking tape can then be wrapped around the feet (separately or together) to restrain the bird further, but still providing access to either tarsus for banding.

The Aba allows for measurements and blood samples to be taken in a way that minimizes handling. Body mass is measured by making a small hole in the Aba material for insertion of a spring scale hook; the bird is suspended in an upright position. Wing chord, wing span, wing tracings,

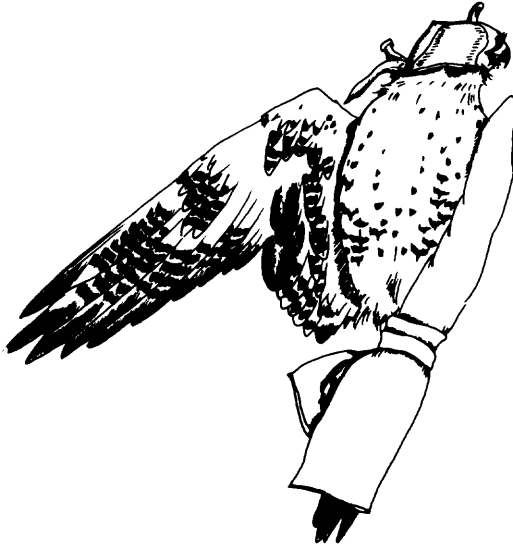


FIGURE 4. Measurements and blood samples can be easily obtained with one wing and tarsi restrained.

molt data, and blood samples (from the brachial vein) are obtained by removing one wing from a pocket, and rewrapping the elastic tape around the tarsi (Fig. 4). Measuring the tail, acquiring molt data, or attaching tail-mounted transmitters are easily accomplished because the *Aba* does not cover the tail area.

Using the *Aba*, one person can safely band, measure, and take blood samples. However, it is not intended as a method for long-term restraint. A bird held in an *Aba* should not be left unattended because it may struggle and escape. The use of hoods in open field conditions requires caution. To prevent possible injury or death of a hooded raptor, a properly fitted hood need not be fully tightened. If a bird accidentally escapes, a loose fitting hood will come off easily, where a tightly closed hood will not.

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