

Buteo albonotatus (Zone-tailed Hawk)

Family: Accipitridae (Hawks, Kites and Eagles)

Order: Falconiformes (Diurnal Birds of Prey)

Class: Aves (Birds)



Fig. 1. Zone-tailed hawk, *Buteo albonotatus*.

[https://www.facebook.com/pg/ttfieldnaturalistsclub/photos/?tab=album&album_id=1015429949023219, downloaded 4 March 2017]

TRAITS. *Buteo albonotatus* is a medium-large hawk which can range from 45-56cm in length, 119-140g in weight and have a wingspan of 119-140cm. The head of the zone-tailed hawk is predominantly black, and adults have bold bars of white on their tails (Fig. 1). The underside of the flight feathers follow a dusky silver-grey barred pattern. Both the cere (base of the beak) and legs are bright yellow. The females are larger than the males (Stoleson and Sadoti, 2010).

DISTRIBUTION. The zone-tailed hawk can primarily be found in neotropical regions (Fig. 2). Its range extends from the subtropical southwestern USA (Arizona and Texas), continuing south through Mexico mainly due to migration for breeding purposes. It is a year-round resident of Central and South America, from Colombia and Venezuela to Paraguay and Brazil, and nearby islands such as Trinidad and Tobago (Stoleson and Sadoti, 2010).

HABITAT AND ACTIVITY. The habitat of the zone-tailed hawk varies from arid environments to semiarid woodlands and humid forests with rugged terrain and a source of water nearby. Open and/or forested areas are the preferred hunting grounds of the zone-tailed hawk. Nests are big and bulky, comprising mostly sticks, lined with green leaves which are believed to ward off ectoparasites, and are usually located 2-10m from the ground in the canopy of trees or outcrops of rock, and may be concealed or left open (Fig. 3). The zone-tailed hawk is a diurnal species preferring to hunt its prey during the day or engaging in whirling display activities (Stoleson and Sadoti, 2010). These regular aerial displays consist of dives, loops, rolls and whirls are a sign of territoriality and are often accompanied by high-pitched, loud calls. Whirling often occurs between a male and female as a courtship ritual (Hubbard, 1974).

FOOD AND FEEDING. *Buteo albonotatus* is primarily an aerial hunter. Prey animals include small-medium sized mammals and birds such as rats, mice, squirrels and quail, reptiles, amphibians and even invertebrates. The variation in diet can be attributed to its frequent migrations. There is a noticeably heavier preference on the prey use of birds and reptiles when compared to other *Buteo* hawks (Stoleson and Sadoti, 2010). Once the zone-tailed hawk has caught sight of its prey, it will soar past it and initiate a flight pattern similar to the turkey vulture (*Cathartes aura*), a non-predator species. Once the zone-tailed hawk is not established as a threat to the prey, it performs a steep swoop with partially closed wings and extended talons to snatch its prey before ascending (Willis, 1963).

POPULATION ECOLOGY. Though a solitary and territorial species, the zone-tailed hawk has been observed sharing nesting sites with fellow raptor species with no antagonistic interactions recorded. Common black hawks (*Buteogallus anthracinus*) have been observed occupying empty nests of the zone-tailed hawk but there is no interaction between the two species and no severe prey competition due to differences in foraging areas. Zone-tailed hawks occur in low densities with a minimum active nest distance of 3.6km and a lifespan of 4 years (Stoleson and Sadoti, 2010).

REPRODUCTION. Following courtship displays (Fig. 4) and mating, a female zone-tailed hawk may lay 1-3 eggs, but typically 2, per breeding season. Egg laying season in Trinidad and Tobago extends from February to June and mid-April to July in northern breeding grounds (Ferguson-Lees et al., 2005). The pair remain monogamous throughout the breeding season. The female incubates the eggs for 28-35 days while being fed by her mate. The male brings 2-3 prey for the female and incubates the egg while she eats. Once the semi-altricial young hatch, the female continues brooding until the chicks are 28 days old. At around 7-21 days after hatching, the older chick may kill or outcompete its younger sibling for food. After the eggs are hatched, an aerial exchange of prey from male to female occurs away from the nest. The female returns, killing and dismembering the prey to feed the chicks. The chicks fledge at approximately 46-52 days after being in the nest (Stoleson and Sadoti, 2010).

BEHAVIOUR. Juveniles gradually increase their distance from the nest and their flight time. As the juveniles get older, the number of flights, flying time and the complexity of their flying manoeuvres increases. They also imitate the hunting methods of the adults, often capturing branches or pine cones instead of prey. The juveniles stay with their parents until the next breeding season when the family bond dissociates (Hiraldo et al., 1989). Juveniles do not show any aggressive behaviours but adults often dive and strike at any approaching intruders (Stoleson and

Sadoti, 2010). The call of the zone-tailed hawk is a harsh, high pitched scream. During courtship, it can become a low, raspy *hrr hrr hrr* (Hubbard, 1974).

APPLIED ECOLOGY. The International Union for Conservation of Nature has listed the zone-tailed hawk as Least Concern due to their prevalence in natural and anthropogenically-modified habitats (IUCN, 2017). However, in Texas it is listed as a threatened species due to encroachment and degradation of their habitat. The zone-tailed hawk is regarded as a pest “chicken” hawk when chickens are available as prey (Stoleson and Sadoti, 2010).

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Fig. 2. Geographical distribution of *Buteo albonotatus*.

[<http://maps.iucnredlist.org/map.html?id=22695926>, downloaded 4 March 2017]



Fig. 3. A zone-tailed hawk nesting.

[<http://www.jimburnsphotos.com/pages/zonetailedhawk.html>, downloaded 4 March 2017]



Fig. 4. A pair of zone-tailed hawks engaged in courtship.

[<http://www.jimburnsphotos.com/pages/zonetailedhawk.html>, downloaded 4 March 2017]

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