

34 Great Horned Owl (*Bubo virginianus* Gmelin, 1788)

Alice Cibois^{1*}, Jean-Claude Thibault² and Jean-Yves Meyer³

¹Natural History Museum of Geneva, CP 6434, CH 1211 Geneva 6, Switzerland;

²Muséum National d'histoire Naturelle, F-75005 Paris, France; ³Délégation à la Recherche, Gouvernement de la Polynésie Française, BP 20981, 98713 Papeete, Tahiti, French Polynesia

Citation: Cibois, A., Thibault, J.-C. and Meyer, J.-Y. (2019) Great Horned Owl (*Bubo virginianus* Gmelin, 1788). In: Downs, C.T. and Hart, L.A. (eds) *Global Trends and Impacts of Alien Invasive Birds*. CAB International, Wallingford, UK, pp. xx–xx.

34.1 Common Names

Great Horned Owl (English), Grand Duc de Virginie, Grand Duc d'Amérique (French), Búho Americano (Spanish).

34.2 Nomenclature

The Great Horned Owl (*Bubo virginianus* Gmelin, 1788) has 15 subspecies currently considered (Holt *et al.*, 2018). It belongs to the order Strigiformes and family Strigidae.

34.3 Distribution

The Great Horned Owl is native to North America (from Alaska and the Northwest Territories to Mexico) and South America (Andes and lowlands from Colombia to Peru, Brazil and Argentina) (Fig. 34.1). It has been introduced to the island of Hiva Oa, Marquesas (French Polynesia, South Pacific).

34.4 Description

The Great Horned Owl is a large and bulky owl, 45–60 cm tall, with a wingspan of 91–152 cm and body mass between 0.9 and 2.5 kg) with stout ear-tufts (Fig. 34.2). Its plumage is greyish-brown, mottled

and vermiculated above and barred below, with a white throat. Clinal variation in plumage exists, with the eastern populations (nominate subspecies) rufous below with a tawny-orange face, western populations darker and northern subspecies greyer. Females are on average larger and more heavily marked than males (Holt *et al.*, 2018).

34.5 Diet

In its native range, small mammals represent the bulk of the Great Horned Owl's diet (around 90%) and include lagomorphs, rodents, voles and ground squirrels. They also feed on birds, amphibians, reptiles, fish, insects, other invertebrates and sometimes carrion (Holt *et al.*, 2018).

On Hiva Oa, the diet of the Great Horned Owl has not been studied but probably includes seabirds (nocturnal petrels), native and introduced land birds such as Fruit Doves (*Ptilinopus* spp.), Kingfishers (*Todiramphus* spp.) and Chickens (*Gallus* spp.), as well as rats (*Rattus* spp.) (Thibault and Cibois, 2017).

34.6 Introduction and Invasion Pathways

The Great Horned Owl was probably introduced only once, with the release of eight birds bought in San Francisco, USA, in December 1927 by the Catholic Mission (Bishop David Lecadre), with the objective of eliminating rats from Hiva Oa (Holyoak and Thibault, 1984). Surveys in the 2000s and 2010s suggested that the species has not yet reached the nearby island of Tahuata (only 4 km from Hiva Oa) (Thibault and Cibois, 2017). The numbers of Great Horned Owls on Hiva Oa are currently not known, but they are regularly recorded by local people, although rarely seen or photographed by ornithologists.

*Corresponding author: alice.cibois@ville-ge.ch

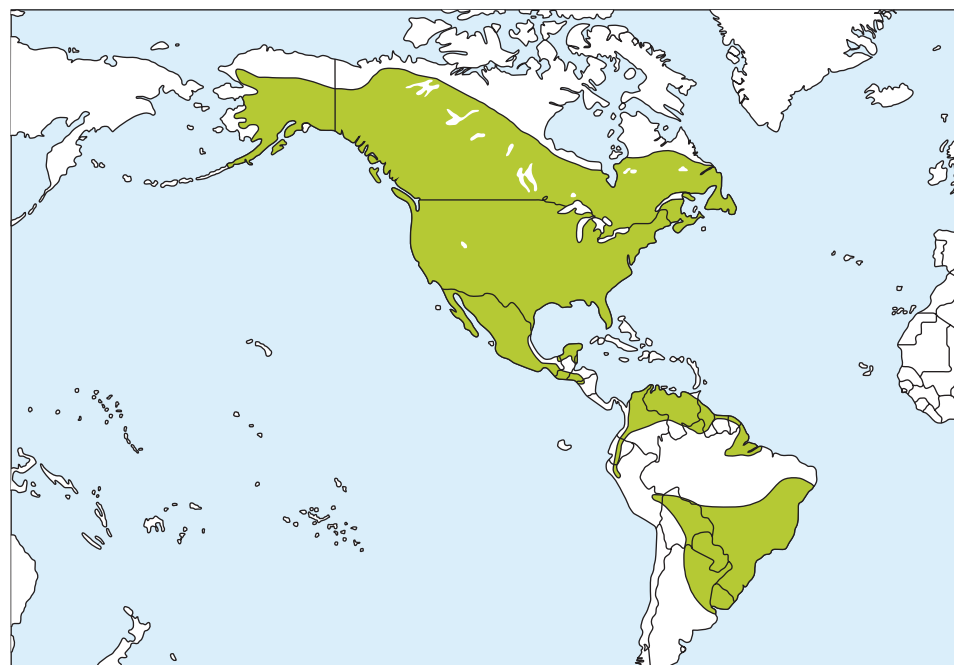


Fig. 34.1. Map of the native (green) and non-native (red dot) distribution ranges of the Great Horned Owl. (Modified from *Handbook of the Birds of the World Alive*, www.hbw.com/.)



Fig. 34.2. An adult Great Horned Owl on Hiva Oa, French Polynesia. (©Photograph: Thomas Ghestemme, SOP Manu.)

34.7 Breeding Behaviour

In its native range, the Great Horned Owl builds its nest in a variety of locations. Examples include in old raptor or corvid nests, in a hollow in a snag, on a human-made platform, in a depression on the ground or on a cliff, and on a cave entrance. Their clutch size varies from one to three eggs. Generally, incubation lasts approximately 28–30 days. The fledglings leave the nest at 6–7 weeks and are fed by the parents for up to 5 months (Holt *et al.*, 2018). There is no breeding behaviour recorded in its introduced range.

34.8 Habitat

The Great Horned Owl, in its native range, is found in a wide array of habitat types with open woodlands and groves (Sibley, 2000; Holt *et al.*, 2018). It occurs locally in desert or rocky areas with woodlands. It generally avoids dense rainforests and cloud forests. In its introduced range, it probably hunts and occupies all habitats from sea level up to 1000 m. It is also found in gardens and plantations near villages, and in dense forests at low and mid-elevations (Anon., 1994; Thibault and Cibois, 2017).

34.9 Impacts

Predation by the Great Horned Owl is possibly a factor of the decline of two endemic landbirds, the Marquesan Kingfisher (*Todiramphus godeffroyi*) and the White-capped Fruit-dove (*Ptilinopus dupetithouarsii*) (Thibault and Cibois, 2017). It probably hastened the extinction of the Red-moustached Fruit-dove (*Ptilinopus mercierii*). As with the Swamp Harrier (*Circus approximans*) in the Society Islands, the introduction of this raptor has had no assessable impact on the control of rats.

34.10 Control

The Great Horned Owl has no natural predators. Control methods have not yet been tested.

34.11 Uses

Injured Great Horned Owls are sometimes kept as pets in aviaries (personal observation).

34.12 Notes

Introduction of the Great Horned Owl to an avifauna devoid of native raptors, like that of the Swamp Harrier in the Society Islands, has had major consequences on the native birds.

34.13 References

- Anon. (1994) Rapaces introduits: éperviers-hiboux. Te Manu No. 9, December 1994. Bulletin de la Société d'Ornithologie de Polynésie, French Polynesia.
- Holt, D.W., Berkley, R., Deppe, C., Enriquez Rocha, P., Petersen, J.L., *et al.* (2018) Great Horned Owl (*Bubo virginianus*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds) *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona, Spain. Available at: www.hbw.com/species/great-horned-owl-bubo-virginianus (accessed 6 November 2019).
- Holyoak, D.T. and Thibault, J.-C. (1984) *Contribution à l'Etude des Oiseaux de Polynésie Orientale*. Mémoires du Muséum National d'Histoire Naturelle, Éditions du Muséum, Paris.
- Sibley, D.A. (2000) *The Sibley Guide to Birds*. Alfred A. Knopf, New York.
- Thibault, J.C. and Cibois, A. (2017) *Birds of Eastern Polynesia. A Biogeographic Atlas*. Lynx Edicions, Barcelona, Spain.