

# The birds of Pantanos de Villa

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## Importance of conservation and challenges

The Pantanos de Villa Wildlife Refuge (RVSLPV) is home to an enormous variety of resident and migratory birds, making it an area of international significance for the conservation of avifauna. As we have already mentioned, this protected natural area has been incorporated into the Ramsar List of Wetlands of International Importance (<https://www.ramsar.org/es>), largely thanks to the diversity of waterfowl found on its bodies of water. These habitats exploited by birds range from extensive and moderately deep lakes, close to or removed from the ocean, to shallow and/or seasonal bodies of water.

The Pantanos de Villa wetlands form part of a network of sites on the Peruvian coast that are extremely important for migrating birds, functioning as they do as “service stations”, offering a place to rest and feed during the long journeys commonly undertaken by migratory species (INRENA, 2004). Ongoing habitat loss resulting from the expansion of the city over recent decades constitutes one of the main threats to the conservation of biological diversity within the RVSLPV.

Going forward, this process will almost certainly lead to a reduction in the diversity of the birds present in the area, as habitats continue to disappear through the drying out of bodies of water and the loss of sand dunes and/or large areas of reed beds and grasslands. With the loss of such habitats, many bird species will be deprived of their preferred locations for refuge, feeding and breeding. On the other hand, it is also true that the urban zones located around the natural area serve as refuges for those bird species able to exploit the advantages of such an environment, including *Burhinus superciliosus* (Peruvian thick-knee), *Athene cunicularia* (burrowing owl), *Pyrocephalus rubinus* (common vermilion flycatcher) and *Parabuteo unicinctus* (Harris’s hawk). Also, migratory species such as *Leucophaeus pipixcan* (Franklin’s gull) use areas of sandy abandoned land as temporary nocturnal refuges, and *Pandion haliaetus* (osprey) takes advantage of large trees and water tanks adjacent to the RVSLPV, employing them as feeding zones and places of temporary refuge, or as observation platforms in its hunt for prey.

**Figure 1.** Harris’s hawk in a eucalyptus tree on the edge of Pantanos de Villa.

**Figure 2:** Franklin's gull on a lamppost in the vicinity of Pantanos de Villa.

The UCSUR campus, as an urban ecosystem within the direct area of influence of the RVSLPV, offers a range of habitats that are exploited by several bird species, which occupy, feed and breed at the lakes and green areas owned by the university. More research is certainly required in order to properly assess the habitats offered by local urban zones. Such research could assist the conservation efforts currently being pursued within the protected natural area.

### **Bird numbers at Pantanos de Villa and their benefits**

The main economic benefit of the great diversity of birds present within the RVSLPV is the tourism activity being generated in the area. A total of 208 species (INRENA, 2004) have been observed, of which more than 75% are migratory (Iannacone *et al.*, 2010). Of this total of 208 species, 49 are resident birds (those which nest within the RVSLPV or its surroundings and can be found throughout the year in different parts of the protected area). These include *Burhinus superciliosus* (Peruvian thick-knee), *Anas cyanoptera* (cinnamon teal), *Podyilymbus podiceps* (pied-billed grebe), *Fulica ardesiaca* (Andean coot), *Gallinula chloropus* (common moorhen) and *Larus cirrocephalus* (gray-hooded gull). The 159 migratory species recorded at the RVSLPV include *Actitis macularia* (spotted sandpiper), *Falco peregrinus* (peregrine falcon), *Larus pipixcan* (Franklin's gull), *Phalaropus tricolor* (Wilson's phalarope), *Larus modestus* (gray gull), *Anas puna* (puna teal), *Himantopus melanurus* (black-winged stilt) and *Larus serranus* (Andean gull). Finally, we must also mention those birds only observed during the periodic El Niño phenomenon: *Pelecanoides garnotii* (Peruvian diving petrel) and *Phoenicopterus chilensis* (Chilean flamingo) (IPDA, 2009).

As Pautrat and Riveros (1998) have mentioned, it should be noted that the generally accepted total number of species is the result of a record inflated by the addition of a significant number of rare or occasional individuals. It has been found that, on average, up to fifty such species can be observed, independently of the time of year and not necessarily always the same species, indicating biodiversity replacement through migratory species. These characteristics are well-known to -and enjoyed by- large numbers of birdwatchers, who visit the RVSLPV throughout the year, often arriving from other parts of the world, attracted by the guarantee of observing the birdlife about which they are so passionate, at the Pantanos de Villa wetlands.

Of course, in addition to such specialized tourism, families, schools and universities also visit the RVSLPV, in order to enjoy its wildlife or to take a boat ride on one of the lakes where waterfowl are the principal attraction, or to learn more about the species found there and their relationship

and contribution to the wetland. In this way, Pantanos de Villa contributes cultural, educational and recreational services to Peruvian society as a whole.

**Figure 3:** It is impossible not to be impressed by the beauty of Pantanos de Villa birdlife. This photograph shows a cormorant.

**Figure 4:** The beauty of local birdlife is epitomized by this *Egretta thula* (snowy egret).

Other benefits associated with birdlife include the pest and disease regulatory services provided by different species through their natural diet. For example, several insectivorous birds contribute to the controlling of insect numbers in the area and surrounding zones, while birds of prey aid in the control of pests, by hunting rodents. These species include *Falco sparverius* (the American kestrel) and the burrowing owl. Humans can also benefit from the work performed daily in the consumption of carrion by the American black vultures (*Coragyps atratus*) resident in the area, which helps prevent the spread of disease.

Another indirect benefit derived from the presence of birds is their role as indicators of environmental health and changes. The changing seasons are marked by the presence of migratory birds, while the accumulation of decomposing organic matter attracts large numbers of American black vultures, thereby highlighting poor environmental practices in the surrounding area.

**Figure 5:** Birds fulfill a crucial role within wetlands. This photograph shows a wren-like rushbird (*Phleocryptes melanops*) feeding on a dragonfly.

### **Monitoring and research**

Migratory birds are the objects of considerable local scientific interest, but their conservation is dependent upon international cooperation. In Peru, efforts must be stepped up to conserve the wetlands upon which many bird species depend. Knowing as we do that the Pantanos de Villa wetlands are an obligatory stopover for migrating birds, we must work to protect them (INRENA, 2004). In part, such protection will require improved actions to oversee the area's administration. At Pantanos de Villa, SERNANP and Prohvilla conduct monthly control and monitoring activities focused upon the numbers and diversity of birds across their different habitats, in order to facilitate decision making associated with management and tourism activity, and to advance conservation goals for the area.

**Figure 6:** One of the most interesting recent research studies conducted in Lima focused upon the distribution of American black vultures, as an indicator of garbage collection management efficiency.

Also, in recent years a number of different research projects have concentrated on a range of aspects associated with the biology of birds within the RVSLPV. Research has been conducted into the numbers and diversity of birdlife (Iannacone *et al.*, 2010; Torres *et al.*, 2006), first sightings or nesting activity (Gonzales *et al.*, 1999; Amaro and Goyeneche, 2017), species behavior (Iannacone *et al.*, 2012) and birds' ability to carry and/or transmit diseases (Ñacarí and Sánchez, 2012; Nelson *et al.*, 2016).

Finally, it should also be noted that further research into birdlife within the RVSLPV is still required, and that it is essential that this information be transmitted to key actors in a position to contribute to improved management and conservation of the wetland, and to environmental education for both local residents and visitors. Specialist conservation institutions will need to adopt improved periodic training initiatives for the park rangers and volunteers who work in the area, so that in addition to their task of observing and recording birdlife, they will be capable of conducting studies focused upon the reproductive biology of Pantanos de Villa waterfowl and, in this way, provide us with a better understanding of the effects of changes in their surroundings, thereby enabling the introduction of effective measures for the conservation of different bird species and their habitats (ProNaturaleza, 2010).