

Burrowing Parrots

an agricultural pest?

By LIC. M. RITA PÉREZ, Biol. MAURICIO FAILLA, VERÓNICA SEIJAS, Dr. PETRA QUILLFELDT & Dr. JUAN F. MASELLO

Burrowing Parrots or Patagonian Conures (*Cyanoliseus patagonus*), well known to *PsittaScene* readers, are one of the most southern Neotropical parrots. In Argentina they occur from the Andes slopes in the Northwest to the Patagonian steppes in the South. They breed in colonies, digging their own nest burrows by tunneling into the face of sandstone, limestone, or earth cliffs (see *PsittaScene* Vol 15 No 4: 12-13, *PsittaScene* Vol 16 No 2: 7-9 and *PsittaScene* Vol 17 No 2: 12-14. Formerly, these parrots were very common in Argentina, but their range has been reduced considerably since the second half of the XIX century, and now they are only regionally abundant. The decline of the Burrowing Parrots is in part due to persecution as a crop pest, increasing conversion of grassland to croplands and trapping for the live bird trade.

In Argentina, Burrowing Parrots are officially considered an agricultural pest according to the Argentinean National Law of Sanitary Defense of the Agricultural Production of 1963 (Act no. 6704/63). However, the only previous objective research on this topic is consistent with our impression that except for marginal agricultural areas and exceptional events, damage has never been intense (for further reading we recommend: *Bucher, E.H. 1992. Neotropical parrots as agricultural pests. In: New World Parrots in Crisis: Solutions From Conservation Biology. Edited by S.R. Beissinger & N.F.R. Snyder, pp. 201-219. New York and London, Smithsonian*

Institution Press). Damage is almost always related to bad agricultural practices, eroded soil, inadequate climatic conditions or insufficient water supply. Despite this, lethal methods of control, such as nest poisoning, massive nesting habitat destruction, roosting tree destruction, use of poisoned bait and shooting of the birds, have been carried out during years in various regions of Argentina, without objective quantification of real damage and adequate consideration of alternatives and consequences.

Since November 2004, we have carried out a detailed study of the very poorly known

diet of Burrowing Parrots and their potential interaction with local agriculture in Northeastern Patagonia. This is the region where the Burrowing Parrot colony of El Cóndor is located. A common claim of the farmers of Northeastern Patagonia is that every year the Burrowing Parrots completely destroy their crops and thus ruin them. But because the region is a marginal agricultural area, very much eroded in some sectors and depending in most cases on irrigation, it is logical to doubt the validity of these claims. The local government has received claims of thousands of dollars on several occasions from local farmers that think the authorities must economically compensate them for losses caused by wildlife, mainly parrots and geese.

As a part of our study, and in co-operation with the biologist Mauricio Failla, Director of the local Wildlife Division of the province of Río Negro, and his wife Verónica Seijas, a questionnaire was distributed to local farmers in order to gather information on the damage to crops caused by parrots in the region around the Burrowing Parrot colony at El Cóndor. This initiative, partly funded by the WPT and a generous donation from the photographer Don Preisler, also aims to investigate the perception that farmers have about bird damage to crops, in particular Burrowing Parrots. This information, together with our own future estimates of bird damage to crops, will help us to assess the real extent of the damage caused by Burrowing Parrots and to propose management measures to mitigate them, if necessary. It is crucial to understand the perception that farmers have



A burrowing parrot chick.

Photo: Petra Quillfeldt



Patchy fields like these are easily attacked by Burrowing Parrots. The damage is usually not attributed to the eroded soil or poor agricultural practices but to the birds.

Photo: Petra Quillfeldt

of the problem if we want to develop mitigating measures that they will be ready to accept.

Between December 2004 and February 2005 we interviewed 70 farmers in the districts of Adolfo Alsina (province of Río Negro) and Patagones (province of Buenos Aires). These districts are the ones daily visited during the breeding season by feeding flocks of the Burrowing Parrot colony at El Cóndor. It is important to bear in mind that none of the farmers in the region are subsistence farmers. In the questionnaire we asked the farmers about characteristics of their crops and fields, the occurrence of damage to their crops caused by birds and wildlife in general, the size of the affected areas and about the implementation and effectiveness of measures of damage control. Most of the interviewed farmers have been extremely co-operative with our queries and we thank them very much.

The results we obtained from this first questionnaire show that the level of damage tends to be overstated. Of 40 farmers interviewed in the district Adolfo Alsina, only 20 (50%) reported some kind of damage to their crops caused by birds. This figure, although important, is much less than that one might expect after a casual talk with a local farmer or after looking at the claims they presented to the local government. Only 7 (18%) mentioned that only Burrowing Parrots caused the damage. Another 8 farmers (20%) pointed out that Burrowing Parrots together with the Upland Goose (*Chloephaga picta*) were responsible of the damage. Lastly, the 5 remaining farmers (12%) pointed out that other birds such as Monk Parakeets (*Myiopsita monachus*), Austral Thrushes (*Turdus falcklandii*) or Field Flickers (*Colaptes campestris*), were responsible for the damage. The main affected crops in this district were maize sunflower and oats. Farmers also pointed out damage on millet and almonds. The extent of damage was variable but in most cases relatively low. Farmers stated that 10% to 100% of their maize crops were affected, although in most cases damage oscillated between 10 and 20%, with only two small fields of 5 and 8 hectares each being seriously affected. It is known that in small fields damage tends to be much higher than in large ones, because the parrots access the fields from the margins. Also, fields in poor condition (eroded and with patchy crop) are much more easily affected (see Photo on page 10). Oat and sunflower showed a similar situation.

Patagones, is the sector of Northeastern Patagonia claiming for the most serious Burrowing Parrot damage to crops in all



Photo: JDC

Dr. Juan Masello inspecting a young chick back at the colony in El Cóndor. Whilst his scientific studies have focused on the breeding birds, Juan's team has expanded the scope of their efforts to include educational work at the colony and surrounding communities, and developing a better understanding of their foraging in neighbouring regions.

Argentina. There, only 11 (37%) of 30 farmers surveyed, reported the occurrence of bird damage to their crops. Only 8 implicated Burrowing Parrots as the main cause of the damage. Only 6 farmers thought the damage caused by Burrowing Parrots affected their profits noticeably. In this area the main crops affected were wheat, sunflower and oats. Most farmers surveyed in this area did not want to answer our question regarding the size of the affected areas, but claimed that the damage extended over large areas. Because they did not give exact figures we doubt the validity of their claims.

The majority of the farmers surveyed indicated that shooting of birds in general and parrots in particular, was the most commonly used method in the region to control crop damage. Although illegal, some of them also reported the use of poisoned baits as a measure of control. But all the farmers surveyed recognized that these two methods of control were ineffective and the cost for bullets and poison often exceeded that of the damage.

As a very encouraging result we found that some farmers in the region use non-lethal methods of damage prevention, like dense sowing of their crops, sowing and harvesting at times when the risk of damage is lowest, or sowing unattractive crops surrounding the main crops (usually rye surrounding wheat). The farmers using those non-lethal methods assured us that they were very effective control methods. In addition to being very effective, those non-lethal methods of damage control had little economical cost.

In the next months we will repeat the questionnaires to a larger number of farmers in order to more precisely identify the most affected sectors. After that we will start quantifying the occasional damage to the most affected crops. All this information will allow us, in co-operation with the local Wildlife Division and the local farmers, to develop management measures to mitigate, where necessary, the damage caused to crops without harming or risking the Burrowing Parrot of El Cóndor.