

**ACTION PLAN FOR THE  
WHITE-TAILED LAUREL PIGEON**  
*(Columba junoniae)*



**Compiled by:**

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### **Timetable**

Workshop: July 1993 - La Laguna, Tenerife  
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### **Reviews**

This document should be reviewed by BirdLife International every four years. An emergency review will be undertaken if sudden major environmental changes, liable to affect the population, occur within the species' range.

### **Geographical scope**

The islands of Tenerife, La Palma and La Gomera in the Canary Islands archipelago (Spain).

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## SUMMARY

### **Background**

The White-tailed Laurel Pigeon *Columba junoniae* is a species endemic to the Canary Islands archipelago, being found only on the islands of Tenerife, La Palma and La Gomera. It occurs in laurel forest and has an estimated population of about 1,200-1,480 birds (Emmerson 1985). The species is considered as Globally Threatened (Collar *et al.* 1994, Tucker & Heath 1994) and is classified as Vulnerable in the *Red Data Book of Spanish Vertebrates* (Blanco & Gonzalez 1992). It is included in Annex I of the EU Wild Birds Directive and its habitat is considered a priority habitat listed in Annex I of the EU Habitats Directive (45.61 to 45.63 Macaronesian Laurel Forests).

The enormous reduction in laurel forest cover over the last 500 years (Ceballos & Ortuño 1976) has resulted in a substantial contraction of the species range. Numbers are, however, believed to have been stable during 1970-1990 although sufficient data are not available to confirm this.

### **Threats and limiting factors**

- \* **Habitat change - critical**
- \* **Habitat loss - high**
- \* **Illegal hunting - high**
- \* **Lack of drinking water - high**
- \* **Changes in agriculture - medium**
- \* **Newcastle disease - unknown**
- \* **Trapping - low**
- \* **Predation - unknown**

### **Conservation priorities**

- \* **Avoid further damage to laurel forest from commercial forestry - essential**
- \* **Control illegal hunting - essential**
- \* **Carry out a full census and initiate a monitoring programme - essential/high**
- \* **Investigate factors affecting breeding performance - essential**
- \* **Ensure the adequate legal protection of the species - high**

- \* **Implement a programme of alternatives to commercial forestry - high**
- \* **Promote restoration and expansion of laurel forest - high**
- \* **Purchase important sites - high**
- \* **Establish new hunting reserves - high**
  
- \* **Undertake a public awareness campaign - high**
- \* **Promote dialogue between different bodies - high**
- \* **Training of wardens - high**

## INTRODUCTION

The White-tailed Laurel Pigeon *Columba junoniae* is endemic to the Canary Islands and is classified as Vulnerable at global and European level (Collar *et al.* 1994, Tucker & Heath 1994) and is classified as Rare by IUCN (Groombridge 1993). It is also listed in Annex I of the EU Wild Birds Directive and in Appendix II of the Bern Convention. Its main habitat, laurel forest is a priority habitat listed in Annex I of the EU Habitats Directive (45.61 to 45.63 Macaronesian Laurel Forests). This species also feeds in pinewoods which are also listed in Annex I of the Directive (42.9 Macaronesian Pine Forests (endemic)).

This action plan includes the conclusions of a workshop held in 1993 in La Laguna (Tenerife) which was attended by organisations involved in the conservation of the pigeon and its habitat; the situation of the other four threatened Canary Island species was also discussed. This plan covers the actions that should be carried out to maintain and boost population of the White-tailed Laurel Pigeon.

## PART 1. BACKGROUND INFORMATION

### Distribution and population

This species is found on the islands of Tenerife, La Palma and La Gomera, with an estimated population of 1,200-1,480 birds (based on minimum estimates made by Emmerson 1985). A new population estimate is needed. Details of the population on each island are as follows:

- \* **La Palma:** has the largest population with around 1,000-1,200 individuals. The species is mainly found in the north-east of the island, being quite abundant in areas such as El Canal and Los Tilos as well as in Barranco de la Herradura.
- \* **Tenerife:** 80-120 birds with the highest densities occurring in Monte del Agua (Los Silos), and Laderas de Tigaiga.
- \* **La Gomera:** 120-160 birds mainly in the North of Garajonay National Park and surrounding areas.

### Life history

#### \* **Breeding**

Nests are constructed on the ground, on small ledges or crevices, or beneath trunks or stones always within the cover of laurel forest. The nest is built mainly of branches, twigs and ferns. The breeding season extends at least from March to September although it is quite possible that nesting actually occurs throughout the year (A. Martín & E. Hernández pers. comm. 1994). The clutch consists of just one egg and the incubation period lasts 18-20 days (Emmerson 1985). The chick leaves the nest at 22-24 days old but at first remains nearby. This is a critical time for chicks as they are exposed to predators (rats, Sparrowhawks *Accipiter nisus*). Juveniles remain in the company of the adults for the first few weeks (Emmerson 1985).

\* **Feeding**

Despite the fact that no thorough studies of its diet have been carried out, the White-tailed Laurel Pigeon is thought to be a fruit-eater feeding on *Ocotea foetens*, *Laurus azorica*, *Persea indica*, *Apollonias barbujana*, *Rhamnus glandulosa* and cultivated species such as apricots, cherries, etc. (Emmerson 1985). In farming areas it supplements its diet with some cereals (wheat, flax, barley) and some flowers (Meade-Waldo 1889; Koenig 1890). Birds have also been observed eating pine seeds in pinewoods (Emmerson 1985).

The fruit of *Ocotea foetens* is important in the White-tailed Laurel Pigeon's diet (particularly on La Palma where these trees are more abundant) as it is available almost all year round. On La Gomera, the White-tailed Laurel Pigeon is restricted to laurel forest as there are no mixed pinewoods. The modified areas within the forest contain cultivated fruit trees that the pigeons occasionally use.

\* **Habitat requirements**

The species occurs in areas with steep slopes, large escarpments and deep canyons, where it prefers mature laurel forest (Emmerson 1985), but also occurs in degraded laurel forest, scrubrier areas with *Myrica faya* and tree heath *Erica arborea* (generally along the lower edges of major stands of laurel forest), in Canary pine woods *Pinus canariensis*, mixed pine stands (generally found along the upper edges of laurel forest) and cultivated areas.

## Threats and Limiting Factors

\* **Habitat loss**

With the arrival of the Spanish in the fifteenth century, laurel forest was subjected to intensive exploitation. Extensive areas of forest were razed to create farmland and large oak trees were felled for timber and fuel, greatly reducing the area of original forest. These activities have decreased considerably but even today laurel forest, especially on La Palma, is still exploited and its conservation is therefore cause of concern.

Importance: high

\* **Habitat change**

Apart from the enormous decrease in its extent, laurel forests have also been profoundly changed and fragmented due to the increased demand for wooden poles and tool handles for the cultivation of recently introduced crops (tomatoes, bananas and vines).

This wood is obtained by coppicing laurel trees so that a large number of shoots sprout from the remaining stump. This results in a thick layer of vegetation mainly consisting of "fayas" and heath that over time becomes extensive (Emmerson 1985). This is carried out along horizontal or vertical strips, depending on the slope, and results in the partitioning of the woods into plots with vegetation at different stages of growth. The best preserved areas of laurel forest are now restricted to inaccessible areas.

Importance: critical

\* **Changes in agriculture**

Recent years have seen a change in agriculture, most evident on La Gomera where fruit farming has decreased. Availability of this food source has thus declined.

Importance: medium

\* **Illegal hunting**

Hunting is almost certainly one of the factors that most affects the White-tailed Laurel Pigeon today. Since the total ban on hunting under Royal Decree 3181/80, the number of hunters has decreased considerably but those who persist cause significant damage to the population. The birds are hunted from hides placed at drinking sites.

Importance: high

\* **Traps and snares**

Traps and snares are known to have been placed at drinking and feeding places.

Importance: low

\* **Lack of drinking water**

Due to massive demand for water in the Canary Islands, all natural water sources in the forests have been artificially channelled at source. This has meant that there are now only a few open drinking places used by pigeons and other animals. These sites are well known to illegal hunters.

Importance: high

\* **Newcastle disease**

This virus, increasingly common in domestic pigeons, is transmitted through air as well as in the eggs and meat of infected birds resulting in a high mortality rate. Danger comes from the introduction of infected birds, eggs and poultry products or from existing sources of infection on the islands.

Importance: unknown

\* **Predation**

Although it is thought that predation by rats could be a limiting factor on the species, no specific study has been done of the impact on eggs and chicks. However, in other studies carried out on the biology and ecology of this species (A. Martín & E. Hernández, pers. comm.1994), it has been shown that rats do eat eggs and young.

In a study of the feeding habits of Sparrowhawk on Tenerife, remains of a single White-tailed Laurel Pigeon were found among 565 prey items identified (Delgado *et al.* 1988).

Predation by feral dogs and cats might occur but it is thought that the impact must be minimal (K. W. Emmerson, pers. comm. 1994).

Importance: unknown

### **Conservation status and recent conservation measures**

Nationally, the species is classed as Vulnerable in the *Red Data Book of Spanish Vertebrates* (Blanco & González 1992) and regionally it is considered to be Endangered on Tenerife, Vulnerable on La Gomera and Rare on La Palma according to the *Red Data Book of Canary Island Terrestrial Vertebrates* (Martín *et al.* 1990). Legally, it is classed as being of Special Interest in Royal Decree 439/90 on which the National Endangered Species List is based.

Recent conservation measures are listed below in chronological order:

- 1970: hunting this species on Tenerife was banned under the General Close Order Season (1970 only).
- 1980: Royal Decree 3181/80 banned hunting, capture, trade, collecting of eggs or young, and preparation of and trade in parts, including stuffed specimens, throughout the country.
- 1981: Garajonay National Park (La Gomera) was established. It is the single most important area in the Canary Islands for the White-tailed Laurel Pigeon.
- 1984: the estate of El Canal y Los Tiles (Los Sauces, La Palma) was declared a Biosphere Reserve under UNESCO's Man and Biosphere programme. This is an important area for this species.
- 1986: since Spain's accession to the EU this year, the following areas important for White-tailed Laurel Pigeon have been designated as SPAs: Garajonay (La Gomera); Tigaiga, Teno and Anaga (Tenerife); Monte de los Sauces and Punta Llana, and Pinar de Garafía (La Palma).
- 1987: The Canary Islands Countryside Law was passed and in accordance with this the following important White-tailed Laurel Pigeon areas were declared Natural Parks: Laderas de Santa Ursula, Tigaiga and Teno (Tenerife); Barranco de los Hombres and Fagundo, Monte de los Sauces and Punta Llana, Cumbre Vieja and Teneguía, Barranco Quintero, El Río, and La Madera and Dorador (La Palma).
- 1989: The Countryside and Wildlife Conservation Law 4/89 was passed, establishing a way of cataloguing nationally threatened species (Articles 29-32) and giving conservation priority to endemic species and subspecies (Article 27c).

1993: the Order of 13 July 1993 which establishes the limitations on hunting and open season includes important Pigeon areas such as: Barranco de Liria on La Gomera; El Canal and Los Tiles Biosphere Reserve (San Andrés and Sauces) in La Palma; Laderas de Tigaiga (Los Realejos) and Monte del Agua (Los Silos) on Tenerife.

1994: EU funding under LIFE regulation was approved for a project for the Conservation of both species of Laurel Pigeon submitted by the Vice Council for the Environment of the Canary Islands Regional Government.

The new Canary Islands Countryside Law was also approved.

## **PART 2. AIMS AND OBJECTIVES**

### **AIMS**

In the short term to conserve the White-tailed Laurel Pigeon population at no less than its 1985 level and in the medium to long term to promote the expansion of its range.

### **OBJECTIVES**

#### **1. POLICY AND LEGISLATIVE**

##### **1.1. To ensure that the White-tailed Laurel Pigeon is given adequate legal protection**

1.1.1. *Ensure that the new Canary Islands Countryside Law adequately protects this species and its habitat*

The Canary Islands Countryside Law, passed in 1994, does not designate any new protected areas but reclassifies existing ones into new protection categories. In addition to seeking to achieve the designation of all areas important for the species, planning instruments for such protected areas - Use and Management Plans, Master Plans (Planes Directores), Conservation Regulations and Special Plans - should aim to address all threats.

Priority: high

Time-scale: short

1.1.2. *Ensure that the new Canary Islands Wildlife Protection Law adequately protects this species*

The draft of the new Wildlife Law is at the consultation stage and includes the Regional Checklist of Threatened Species and the new status of Biological Refuge as a precautionary measure. This legislation should address the protection of the species, in the wider countryside as well as in protected areas, as required under Law 4/1989 on the Conservation of the Countryside, Wildlife and Plants.

Priority: high

Time-scale: short

## **1.2. To ensure, through Countryside Planning Plans, that exploitation of the countryside is compatible with the conservation of this species and its habitat**

### *1.2.1. Avoid damage to laurel forest from commercial forestry*

In the short term commercial forestry (felling or planting) in mature laurel forest should be discouraged and guided towards suitable alternative areas. Regeneration should be given priority over commercial forestry in areas of degraded laurel forest with the aim of eliminating commercial forestry in laurel forest areas in the medium term.

Priority: essential

Time-scale: short

### *1.2.2. Implement a programme of alternatives to present commercial forestry practices*

Alternatives to commercial forestry are needed such as the promotion of substitute materials for poles and tool handles (poles have already been manufactured using galvanised tubing) to meet farmers' needs. Consideration could also be given to replanting areas adjacent to laurel forest so that they can subsequently be used for commercial forestry.

Priority: high

Time-scale: short

## **1.3. To establish new hunting reserves**

Consideration should be given to establishing new hunting reserves in areas such as El Rejo (La Gomera), Barranco del Agua and Barranco de la Herradura (La Palma), and Barranco de Cochinos and Cuevas Negras (Tenerife). Other human activity likely to have a negative impact on the species and its habitat should be modified or diverted away from these areas.

Priority: high

Time-scale: medium

## **1.4. To increase health controls on birds imported to the Canary Islands**

These measures must be applied to all live birds being imported, whether for exhibition or for consumption, in order to prevent the spread of Newcastle disease. It is also important that controls are carried out on bird rearing facilities to detect the presence of this virus.

Priority: low

Time-scale: short

## **2. SPECIES AND HABITAT PROTECTION**

### **2.1. To control illegal hunting**

Hunting continues to be an important threat to the White-tailed Laurel Pigeon. The number of wardens needs to be increased so that surveillance can be stepped up, especially in hunting reserves set up under the Annual Close Season Order. The support of SEPRONA (Civil Guard wildlife service) could be sought and they could be supplied with information on the places most frequented by hunters. It is important that sanctions imposed under current law (700,000 pta.) be applied when charges are brought (Order 14/1988 on the Updating of Values of Game and Protected Species).

Priority: essential

Time-scale: immediate

## **2.2. To promote the restoration and expansion of laurel forest**

The main introduced tree species in laurel forests in the Canary Islands are: chestnut *Castanea sativa*, eucalyptus *Eucalyptus globulus* and Monterey pine *Pinus radiata*. The latter is a fast-growing Californian species with little resistance to fire which was used to replant large deforested areas of Tenerife in the 1940s. The eradication of this species would allow about 10% of the laurel forest on this island to recover. The Vice Council for the Environment of the Canary Islands Regional Government recently began implementing the Annual Forestry Plan which includes the felling of 2,000 hectares of Monterey pine on Tenerife and replanting with native species. Plans that include felling and replanting with other species would benefit from prior analysis to select forestry practices which would most benefit the environment. Laurel forest regeneration is slow therefore extensive reforestation with native species might be needed in suitable areas.

Priority: high

Time-scale: ongoing

## **2.3. To purchase important sites**

The purchase of some of the important areas for this species currently in private ownership, both within and outside designated areas, would make it possible to carry out the optimum management for this species and its habitat.

Priority: high

Time-scale: medium

## **2.4. To provide additional artificial drinking points for the pigeons**

This should be done mainly to reduce the number of pigeons gathering at existing natural drinking areas so that they are not such easy prey for hunters. Drinking stations would also make it easier for the birds to find water.

Priority: medium

Time-scale: medium

## **2.5. To initiate a captive breeding programme**

This is not a priority. It would be useful to establish contacts with recognised and prestigious zoological collections that would be interested in breeding this species should the need arise. This information can be obtained from the IUCN Captive Breeding Specialists Group which brings together the main experts and zoological collections.

Priority: low

Time-scale: long

# **3. RESEARCH AND MONITORING**

## **3.1. To carry out a full census of the species**

Existing information comes mainly from work carried out by K. W. Emmerson between 1983 and 1985, and new data on the different breeding groups are now needed. A recent inventory of breeding areas would allow better targeting of conservation action.

Priority: essential

Time-scale: short

### **3.2. To improve monitoring methods**

The Madeira Laurel Pigeon *C. trocaz* is monitored every three months through fixed transects in several biotopes where the species is found (Oliveira & Jones in press). Taking this and other studies as a basis, a similar methodology suited to the particular requirements of the Canary Island White-tailed Laurel Pigeon should be designed. Exchange of information between Laurel Pigeon researchers in Madeira and the Canary Islands is highly recommended.

Priority: high  
Time-scale: short

### **3.3. To monitor the population regularly**

An overall census should be carried out every 4 years with annual estimates in areas of high density in order to detect population fluctuations and trends.

Priority: high  
Time-scale: short

### **3.4. To study breeding success and the factors affecting it**

A study must be carried out urgently on the factors affecting breeding success especially predation (rats, cats) and food availability. The results will make informed decisions possible on whether it is necessary to start measures to control predators, particularly rats.

Priority: essential  
Time-scale: immediate, ongoing

### **3.5. To undertake a socio-economic study of commercial forestry**

The main aim of this study would be to evaluate the economic importance of commercial forestry for the local population, and its repercussions on the conservation of the biotope. This study should address alternatives to current practices hindering the conservation of the species and its habitat.

Priority: medium  
Time-scale: medium

## **4. PUBLIC AWARENESS AND TRAINING**

### **4.1. To undertake a public awareness campaign aimed at local people**

This should be aimed at those living near areas important for this species, particularly children and young people, using different types of publicity material to raise awareness of the importance of the species and its habitat. There is also a need to target the hunting fraternity to gain their support for the control of illegal hunting.

Priority: high  
Time-scale: short, ongoing

**4.2. To promote ongoing dialogue between the different bodies involved in the conservation of the pigeon and its habitat**

The promotion of constant communication between the different bodies responsible for the protection of this species and its habitat is a priority. This would help ensure the efficient use of resources. The formation of a Laurel Pigeon working group is a possible means of achieving this.

Priority: high

Time-scale: short

**4.3. To increase the effectiveness of wardens**

Staff motivation should be emphasised during the selection process for additional wardens and ongoing training should be provided through short course and job exchanges.

Priority: high

Time-scale: short

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