

**ACTION PLAN FOR THE DARK-TAILED LAUREL PIGEON**  
*(Columba bollii)*



**Compiled by:**

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### **Timetable**

Workshop: July 1993 - La Laguna, Tenerife  
First draft: January 1993  
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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, La Gomera and El Hierro in the Canary Islands archipelago.

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**SUMMARY**

**Background**

The Dark-tailed Laurel Pigeon *Columba bollii* is endemic to the Canary Islands occurring in the laurel forests of Tenerife, La Palma, La Gomera and El Hierro with an estimated population of 1,700 individuals (Emmerson 1985, Emmerson *et al.* 1993). It is classified as Vulnerable in the *Red Data Book of Spanish Vertebrates* (Blanco & González 1992) and also at world level (Collar *et al.* 1994). The species 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 Forest).

The range of this species has contracted substantially since the nineteenth century. Emmerson *et al.* (1986) commented that on Tenerife the Dark-tailed Laurel Pigeon now occupies just 35-40% of its original area, which gives an idea of the scale of the destruction and alteration of laurel forest on the island.

**Threats and limiting factors**

- \* **Habitat loss - critical**
- \* **Habitat change - critical**
- \* **Illegal hunting - high**
- \* **Lack of drinking areas - high**
- \* **Placing of snares and traps - low**
- \* **Newcastle disease - unknown**
- \* **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 of 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 Dark-tailed Laurel Pigeon is endemic to the Canary Islands. It is classified as Rare by IUCN (Groombridge 1993) and is considered Vulnerable at world level (Collar *et al.* 1994) and at European level (Tucker & Heath 1994). The species is listed in Annex I of the EU Wild Birds and in Appendix II of the Bern Convention. Its habitat is listed in Annex I of the EU Habitats Directive as a priority habitat (45.61 to 45.63 Macaronesian Laurel Forests).

This action plan incorporates the discussions and conclusions of the meeting held in July 1993 at La Laguna (Tenerife) which was attended by those involved in the conservation of the Dark-tailed Laurel Pigeon and its habitat: the situation of the other four threatened bird species in the Canary Islands was also discussed. This plan addresses the actions that should be carried out to maintain and boost the population of the species.

## PART 1. BACKGROUND INFORMATION

### Distribution and population

This species is found on Tenerife, La Palma, La Gomera and El Hierro. On Gran Canaria the remains of a pigeon that used to inhabit the island have been found. Its bones are similar to those of Laurel Pigeons, but it has not been possible to identify the species due to lack of comparative material (Alcover & Florit 1986). Moreover, Tristram (1889) recorded three Laurel Pigeons on the island which he thought possibly belonged to this species.

The estimated minimum total population of Dark-tailed Laurel Pigeon is 1,150-1,300 individuals (Emmerson 1985) However, recent studies suggest that the population is about 1,700 individuals (Emmerson *et al.* 1993). The numbers on each island are as follows:

- \* **La Palma:** 250-300 birds in very restricted areas. The highest densities occur in the north-west (San Andrés and Saucos).
- \* **Tenerife:** 350-400 minimum. Anaga and Los Silos and the small forest patches between these two sites are important areas.
- \* **La Gomera:** 550-600 individuals mainly concentrated in Garajonay National Park although more recent studies suggest that the population in the park is over 1,000 individuals (Emmerson *et al.* 1993).
- \* **El Hierro:** the first observation of Dark-tailed Laurel Pigeon on the island was made in 1985 (Martín 1985) and nesting was recorded in 1993 (Martín *et al.* 1993). The population is estimated to be over 30 birds with up to 12 pigeons recently observed together at a drinking station (A. Martín pers. comm. 1994). The low number may be due to poor plant diversity within the laurel forest on this island with "fayas" and heath predominant (Emmerson 1985).

### Life history

\* **Breeding**

Nesting occurs exclusively in trees within laurel forest. The height of the nest varies, the most frequently used tree species being *Erica arborea*, *Laurus azorica*, *Myrica faya* and *Ilex canariensis* (Emmerson 1985). Nests appear well camouflaged by foliage possibly to protect them from aerial predators such as Sparrowhawk *Accipiter nisus*, Buzzard *Buteo buteo* or Raven *Corvus corax*. They can be re-used for successive clutches and successive years. The most common nest material is small branches of heath *Erica arborea* (Emmerson 1985).

The breeding season extends from October to July (Emmerson 1985) although it is very possible that birds breed all year round. The long breeding season must be related to the continuous availability of fruit, the main food of this species.

The clutch is a single egg incubated for 18-19 days (Koenig quoted in Emmerson 1985) and the chicks spend 30-35 days in the nest (Emmerson 1985).

\* **Feeding**

The diet is mainly made up of fruit (*Laurus* sp., *Persea indica*, etc.) the precise composition varying with the timing of fruiting of different tree species (Emmerson 1985).

Besides fruit, the birds feed on leaves, shoots, and leaf and flower buds, and they may, if the opportunity presents itself, supplement their diet with small invertebrates (Emmerson 1985). Some cereals (wheat, rye) are also taken (Cramp 1985). Birds have been observed feeding both on the ground and in the trees.

\* **Habitat requirements**

The species principally inhabits areas of closed-canopy laurel forest, particularly ridges and passes where the forest reaches its greatest development in terms of both tree size and plant diversity. In summer, when food is scarce, the birds will use the lower areas of laurel forest and agricultural fields where most of the trees in fruit at this time are found (*Myrica faya*, etc.) (Emmerson 1985). However, this species avoids farmed or degraded forest areas to a greater extent than the White-tailed Laurel Pigeon *Columba junoniae*.

## **Threats and limiting factors**

\* **Habitat loss**

With the arrival of the Spanish in the fifteenth century, laurel forests were subject to intensive exploitation. Extensive areas of forest were razed to create farmland and large trees were felled for timber and fuel greatly reducing the area of original forest.

These activities have decreased considerably but even today laurel forest is still exploited, especially in La Palma, and its conservation is therefore cause of concern.

Importance: critical

\* **Habitat change**

Apart from the enormous decrease in its extent laurel forests have also been profoundly changed and fragmented due to the increase over the last few decades in the demand for wooden poles and tool handles used in the cultivation of 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 bands, 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 points.

Importance: critical

\* **Illegal hunting**

Hunting is almost certainly one of the factors that most affects the Dark-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 feeding and drinking points.

Importance: high

\* **Placing of snares and traps**

Snares and traps are known to have been placed at drinking and feeding areas.

Importance: low

\* **Lack of drinking areas**

Due to massive demand for water in the Canary Islands, all natural water sources in the forest 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. The disease has so far not been reported in the wild.

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 (Emmerson 1985; A. Martín & E. Hernández pers.comm.) it has been shown that rats do eat eggs and chicks.

In a study of the feeding habits of Sparrowhawks on Tenerife, it was found that Dark-tailed Laurel Pigeon made up 1.2% (7 items) out of 565 prey items identified (Delgado *et al.* 1988).

Predation by feral dogs and cats may be affecting the population but the effect is thought to be minimal (K. Emmerson pers. comm. 1994).

Importance: unknown

**Conservation status and recent conservation measures**

Nationally the species is classified as Vulnerable in the *Red Data Book of Spanish Vertebrates* (Blanco & González 1992) and has been declared of Special Interest by Royal Decree 439/90. Regionally it is classified as Endangered on El Hierro, Vulnerable on Tenerife and La Palma, and Rare on La Gomera in the *Red Data Book of Land Vertebrates of the Canary Islands* (Martín *et al.* 1990).

Recent conservation measures are listed below in chronological order:

1970: hunting this species on Tenerife was banned under the General Close Season Order (1970 only).

1974: hunting was banned by the General Close Season Order in the areas of Las Mercedes, Mina and Yedra, San Andrés, Pijaral, Igueste and Anaga (Tenerife).

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 most important area in the Canary Islands for Dark-tailed Laurel Pigeon.

1984: the estate of El Canal and Los Tiles (Los Sauces, La Palma) was declared a Biosphere Reserve under UNESCO's Man and Biosphere programme. This area is important for the Dark-tailed Laurel Pigeon population on La Palma.

1986: since Spain's accession to the EU in this year the following areas important for this species 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) and El Hierro Natural Park (El Hierro).

1987: The Canary Islands Countryside Law was passed and in accordance with this the following important Dark-tailed Laurel Pigeon areas have been declared Natural Parks: Anaga, Laderas de Santa Ursula, Los Silos and Tigaiga (Tenerife), Barranco de los

Hombres and Fagundo, Monte de los Sauces and Punta Llana, Cumbre Vieja and Teneguía (La Palma), and El Hierro Natural Park (El Hierro).

- 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 sub-species (Article 27c).
- 1993: Approval was given for EU funding under LIFE regulation for a project submitted by the Gran Canaria Government to restore an area in Doramas where the species might be reintroduced at some point in the future.
- 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 Dark-tailed Laurel Pigeon population at no less than its 1993 level and in the medium term to promote the expansion of its range.

### **OBJECTIVES**

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

##### **1.1. To ensure the Dark-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, the 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: essential

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 the 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 favoured over commercial forestry in areas of degraded laurel forest with the aim of eliminating all damage to laurel forest from commercial forestry 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 alternative materials for poles and tool handles (poles have already been manufactured using galvanised metal tubing) to meet farmers' needs. Consideration should 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, Barranco de la Herradura, Barranco de Fagundo and Barranco de los Hombres (La Palma), and Barranco de Cochinos and Cuevas Negras (Tenerife). Other human activity in these areas, likely to have a negative effect on the species and its habitat, should be modified or diverted away to a suitable location.

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 living birds being imported, whether for exhibition or 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 a serious threat to the Dark-tailed Laurel Pigeon. The number of wardens, especially on the smaller islands (La Gomera, La Palma, and El Hierro) needs to be increased to provide greater surveillance of important areas, particularly hunting reserves established under the Annual Close Season Order. The support of SEPRONA (Civil Guard wildlife service) could be sought and they could be provided with information on the places most frequented by hunters.

It is important that the penalties imposed under current law (700,000 pta.) be applied when charges are brought (Order 14/1988 on the Updating of the Value 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 forest in the Canary Islands are: chestnut *Castanea sativa*, eucalyptus *Eucalyptus globulus* and Monterey pine *Pinus radiata*. The latter is a rapidly 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 10% of 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 reforestation would be more effective if prior analysis were carried out 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**

Purchase of some of the important areas for this species currently in private ownership, both within and outside protected 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 drinking points**

This should be done to reduce the number of pigeons gathering at existing natural drinking areas so that they are not such easy prey for hunters. Additional drinking points 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 at the moment. However, it would be useful to contact recognised and prestigious zoological collections that would be interested in breeding the species should the need arise. This information can be obtained through the IUCN Captive Breeding Specialist Group.

Priority: low

Time-scale: long

## **3. RESEARCH AND MONITORING**

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

Existing information mainly comes from work carried out between 1983 and 1985 (Emmerson 1985) with more recent information available only for Garajonay (Emmerson *et al.* 1993). New data on all the different breeding groups in the Canary Islands, including El Hierro, are now needed. A recent inventory of all 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 through fixed transects every three months 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 Dark-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**

The overall census should be repeated every 4 years with annual estimates in areas of high density 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 the need for measures to control predators, particularly rats.

Priority: essential

Time-scale: immediate, ongoing

**3.5. To undertake a socioeconomic 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 forestry 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 campaign should be aimed mainly at those living near areas important for this species, particularly children and young people, using different kinds of publicity material to raise awareness of the importance of the species and its habitat.

There is also the 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 courses and job exchanges.

Priority: high  
Time-scale: short

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