SPECIES PROFILE

Red Lory

Eos bornea

Eos rubra

Photo: Red Lory (*Eos bornea*) Jurong Bird Park

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Department of Primary Industries, Parks, Water and Environment
Natural and Cultural Heritage Division

Tasmanian Government

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About this Species Profile

This Species Profile is developed in accordance with the *Policy and Procedures for the Import, Movement and Keeping of Vertebrate Wildlife in Tasmania* (DPIPWE 2011), pursuant to S32 of the *Nature Conservation Act 2002*.

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Introduction

NAME AND TAXONOMY

Kingdom: Animalia

Phylum: Chordata

Class: Aves

Order: Psittaciformes

Family: Psittaculidae

Genus: *Eos*

Species: *bornea* (and *rubra*)

Sub-species or variety:

E. b. cyanonotha (Vieillot, 1818) – S Moluccas (Buru)

E. b. bornea (Linnaeus, 1758) – S Moluccas (Boano, Seram, Ambon, Haruku, Saparua, Banda Is, Seram Laut Is, Watubela Is, Tayandu Is, Kai Is).

Common names: Red Lory, Buru Lory and Mollucan Lory

Known hybrids: Hybridisation of Lories can occur with birds kept in captivity. No instances of hybridisation were observed in the literature with other wild bird species.

Close relatives: The Eos genus is a group of parrots that include the Lories and lorikeets. There are six species, all endemic to islands of eastern Indonesia. They have predominantly red plumage with blue, purple or black markings. Males and females are similar in appearance.

DESCRIPTION

Adult Red Lories grow to 31 cm in length, have a wingspan of 16 - 17 cm, weigh around 180 grams and have a bill length of 2.2 – 2.5cm.

Male and females have identical external appearances, while juveniles are duller and have brown irises and a brownish beak. Lory breeders depend on DNA or endoscopic sexing to determine sex.

Adult red Lories show more red than any other member of the *Eos* genus being almost entirely red, with the plumage of the upper body being all red. The primary feathers are black, secondaries are tipped with black, wings red with blue on coverts, tail reddish-black with the underside dull red. Eye ring bluish-black, cere and feet are dark blue-black. The beak is orange

to red and the legs are grey. The irises are red except in *E. b. bernsteini*, which has brown irises. There is no bare skin at the base of the lower mandible. Their bills are narrow and less powerful than other types of parrots.

The word *Eos* (Ἕως) is Greek for 'Goddess of the dawn' referring to the plumage of the Red Lory (Oxford Dictionary).

Apart from their almost entirely red colour a defining characteristic of a Lory is their brush tongues with papillae at the tips to help them feed on pollen and nectar.

Little seasonal variations in appearance have been recorded. The Red Lory is dissimilar to Australian parrots in appearance simply because of its dominate red colouration. Most Australian parrot species have green and blue colourings as well as red when it is present.

Two other species profiles have been prepared for Lories: the Black Capped and Yellow-bibbed Lories.

There is no record of the Red Lory as an environmental or agricultural pest.

The Red Lory is listed on the 'List of Specimens Taken to be Suitable for Live Import (29/11/2001)' made under section 303EB of the *Environment Protection and Biodiversity Conservation Act 1999*.

CONSERVATION AND LEGAL STATUS

CONSERVATION STATUS

The Red Lory is not globally threatened and is listed as least concern by the IUCN. Despite the fact that the population trend appears to be decreasing owing to unsustainable levels of exploitation that includes capture in the wild and habitat loss, the decline is not believed to be sufficiently rapid to approach the thresholds for Vulnerable as defined by the IUCN.

The species has been heavily traded and is listed on the CITES[1] Trade Database and as such international trade in specimens of this species is subject to regulation under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The species has an extremely large range and while the global population size has not been quantified the species is described as common to abundant.

LEGAL STATUS AUSTRALIA

The Red Lory is not listed under the *Commonwealth Environment Protection and Biodiversity Act 1999*.

In Tasmania the Red Lory is currently listed as a controlled animal under the *Nature Conservation Act 2002*.

[1] Convention in International Trade in Endangered Species – web link

BIOLOGY AND ECOLOGY

LIFE HISTORY

Red Lories generally live to between 15 and 28 years of age. The difficulty of breeding the Red Lory is considered moderate although of the Lory group they are one of the more easy to breed species.

Birds first come sexually mature at around 8 months and can produce up to three clutches per year, each with two eggs. Incubation takes approximately 25 days. Young fledge between 7 - 9 weeks and can be independent in a further 3 - 4 weeks.

No information was found regarding age at which breeding ceases, or if females can store sperm, although some Lories have been known to lay fertile eggs at age of twenty.

It appears that there is little chance of hybridisation with other species (both in the wild and in captivity) given the low numbers held in aviaries and their high value. The chance of survival of a red Lory in the wild would appear to be low.

HABITAT REQUIREMENTS AND PREFERENCES

The habitat of the Red Lory in The Maluku Islands is a tropical wet climate with no dry or cold season. The average annual temperature is 27.1 degrees Celsius with average lows of 21 and highs of 31. Average annual precipitation is 3459 mm. (ClimaTemps.com)

Red Lories nest in tree hollows of old tress, generally high up in the canopy and forage on nectar of *Eugenia spp*. and *Erythrina spp*. Red Lories generally occupy the coastal regions, lowland forest, mangroves, secondary forest and coconut plantations in areas with fruit or flower carrying trees and bushes. They generally inhabit the lower altitudes but have been observed up to 1200 meters above sea level.

NATURAL GEOGRAPHIC RANGE

The Red Lory (*Eos bornea and Eos rubra*) are endemic to the Malucu Islands and surrounding islands in Indonesia.

The Red Lorys natural range is approximately 57,900 km^2.

INTRODUCED GEOGRAPHIC RANGE

While many thousand birds have believed to have been taken from the wild for illegal trade little is recorded about introduced populations, and no records were found that mentioned feral establishments or hybridisation with wild populations. References to *Eos bornea* being introduced to Taiwan are vague in the literature however it appears this occurred during 1980-1990's (Taiwan Biodiversity Information Facility).

POTENTIAL DISTRIBUTION IN TASMANIA

Using a model developed by the Bureau of Rural Science (DAFF) the potential Australian distribution (shown in Figure 1) was extrapolated.

Modelling indicates that Tasmania's climate is highly dissimilar and the model produced the lowest climate match score possible, being '0'.

Because the natural distribution of the Red Lory is very different to the climate of Tasmania the potential for this species to establish in Tasmania appears unlikely.

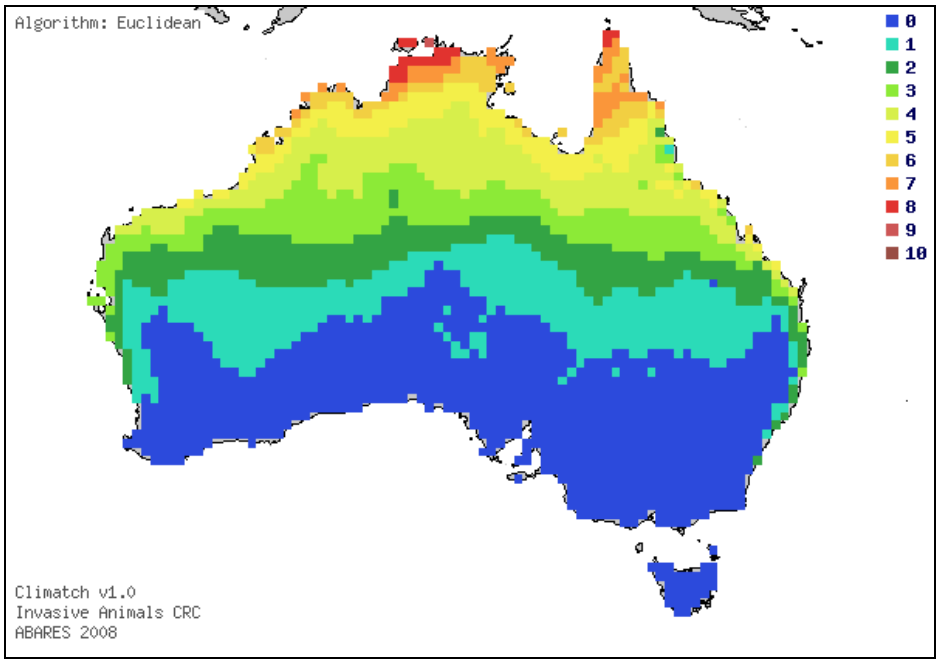

Figure 1 Climate match results showing the potential geographic distribution of the Red Lory (*Eos bornea*), in Tasmania. (Source: CLIMATCH – http://data.daff.gov.au:8080/Climatch/climatch.jsp)

DIET AND FEEDING BEHAVIOUR

In the wild, red Lories eat nectar, flowers and insects, especially those found in Eugenia and Erythrina trees. They will also eat the green seeds found in the fresh fruit. In captivity Red Lories will eat fruits and vegetables including: apples, pomegranates, papaya, grapes, cantaloupe, pineapple, figs, kiwi, corn-on-the-cob and flowers such as pansies, nasturtiums, roses, hibiscus, marigolds, and dandelions.

SOCIAL BEHAVIOUR AND GROUPINGS

Red Lories are conspicuous and often occur in large flocks of up to fifty especially to feed. When travelling between islands in their home range they occur in smaller flocks and have been observed flying fast and high. In captivity they can be territorial and will defend chicks even attacking cats and dogs. Red Lories require a high level of attention as pets, being intelligent and highly interactive.

NATURAL PREDATORS AND DISEASE

Potential predators of the Red Lory in Tasmania would include brown goshawk, harrier and peregrine falcon.

Lories are susceptible to hemochromatosis an iron storage disease that causes a large amount of iron to accumulate in body tissue, which can be fatal. Ensuring total dietary iron intake remains below 100 parts per million and feeding Lorys fruits and vegetables that are low in iron and ascorbic acid can reduce the chance of this disease.

THREAT TO HUMAN SAFETY

Red Lories being a medium-sized Psittacine species are not equipped to cause any serious harm to members of the public. A lack of claws or talons, or a ripping beak and its small size prevents this from being likely.

HISTORY AS A PEST

The Red Lory is not recorded in the Global Invasive Species Database – a record of the world's 100 worst invasive species, managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission.

No records of the species being a pest, causing damage to the environment or agriculture were found in the literature. No records were found of the species spreading rapidly following release in new environments.

POTENTIAL IMPACT IN TASMANIA

From a review of available information it appears that the Red Lory is not likely to have any serious human health, biosecurity or environmental impacts in Tasmania.

While the Red Lory is not present in Western Australia and is prohibited entry to the state in order to preserve a strict biosecurity approach, the species is bred and sold in Queensland.

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