



Birds in Coffee Agroforestry Systems  
of  
West Lampung, Sumatra.

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## Declaration

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October 2005

## Abstract

In the Sumberjaya district of West Lampung, Indonesia, there has been widespread replacement of rainforest by robusta coffee. However, few studies have explored the relationship between birds and coffee gardens in Southeast Asia. This study examines the use of coffee gardens and other habitats by birds in the Sumberjaya and Pesisir regions. Birds and their habitat use were surveyed, as were structural and floristic vegetation features. Interviews with farmers indicated land management practices and limitations, as well as local perceptions of shade trees, birds and conservation programs.

There were clear differences in bird diversity and assemblage uniqueness between types of coffee gardens. Over the region, 'multistrata' gardens supported the greatest number of species. However, all coffee types had lower taxonomic diversity of birds than did forest. Frugivores, and birds of high conservation dependence, were poorly represented in coffee gardens. Microhabitat use by birds was significantly different between habitats, and it appeared that the birds did make use of structural features as they became available.

Farmers indicated that shade trees had benefits such as sheltering coffee plants, and providing produce, but were also apprehensive about over-shading. Many claimed that bird assemblages have changed, yet while describing habitat loss as a past problem, few people felt that forest loss would cause bird deaths. Most farmers believed that coffee gardens had potential to provide useful bird habitat. Interviewees believed that both Government and the community were responsible for conservation. Many showed interest in co-operative conservation programs, particularly if they allowed farmers flexibility, or if they involved incentives related to land tenure. There was also interest in market-based schemes such as eco-certification.

The primary action needed for conservation of Sumberjaya's birds is to minimise ongoing forest degradation. This may be achieved by linking incentives such as land tenure to forest protection. Capacity to create a certified coffee scheme may be limited by poor coffee quality and inappropriate garden characteristics. Farms maintained primarily for coffee production showed limited value for rainforest-adapted birds. However, the Krui damar gardens suggest a model, which as a forest buffer zone, may allow a more gentle spatial transition from agricultural to forest conditions.

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A fine person.

Golden - winged, silver-winged,  
Winged with flashing flame,  
Such a flight of birds I saw,  
Birds without a name:  
Singing songs in their own tongue-  
Song of songs- they came.

One to another calling,  
Each answering each,  
One to another calling  
In their proper speech:  
High above my head they wheeled,  
Far out of reach

On wings of flame they went and came  
With a cadenced clang:  
Their silver wings tinkled,  
Their golden wings rang;  
The wind it whistled through their wings  
Where in heaven they sang.

They flashed and they darted  
Awhile before mine eyes,  
Mounting, mounting, mounting still,  
In haste to scale the skies,  
Birds without a nest on earth,  
Birds of Paradise.

from 'Birds of Paradise' by Christina Rossetti