

# STATUS AND RANGE DECLINE OF ORANGE-NECKED PARTRIDGE

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## INTRODUCTION

1. Global Biodiversity has been markedly declining due to Anthropogenic impacts, especially habitat loss and hunting in tropical region, including South East Asia, one of global biodiversity hotspot.
2. Galliform species are diverse in South\_East Asia but very few reseaches on their status and ecology, making it difficult for conservation, though they are faced such threats.
3. Study species: a restricted range species Orange-necked Partridge (ONP) (*Arborophila davidi*)

## OBJECTIVES

- To define ecology and conservation status of Orange-necked Partridge.
- Estimate historical range and range decline of the species.

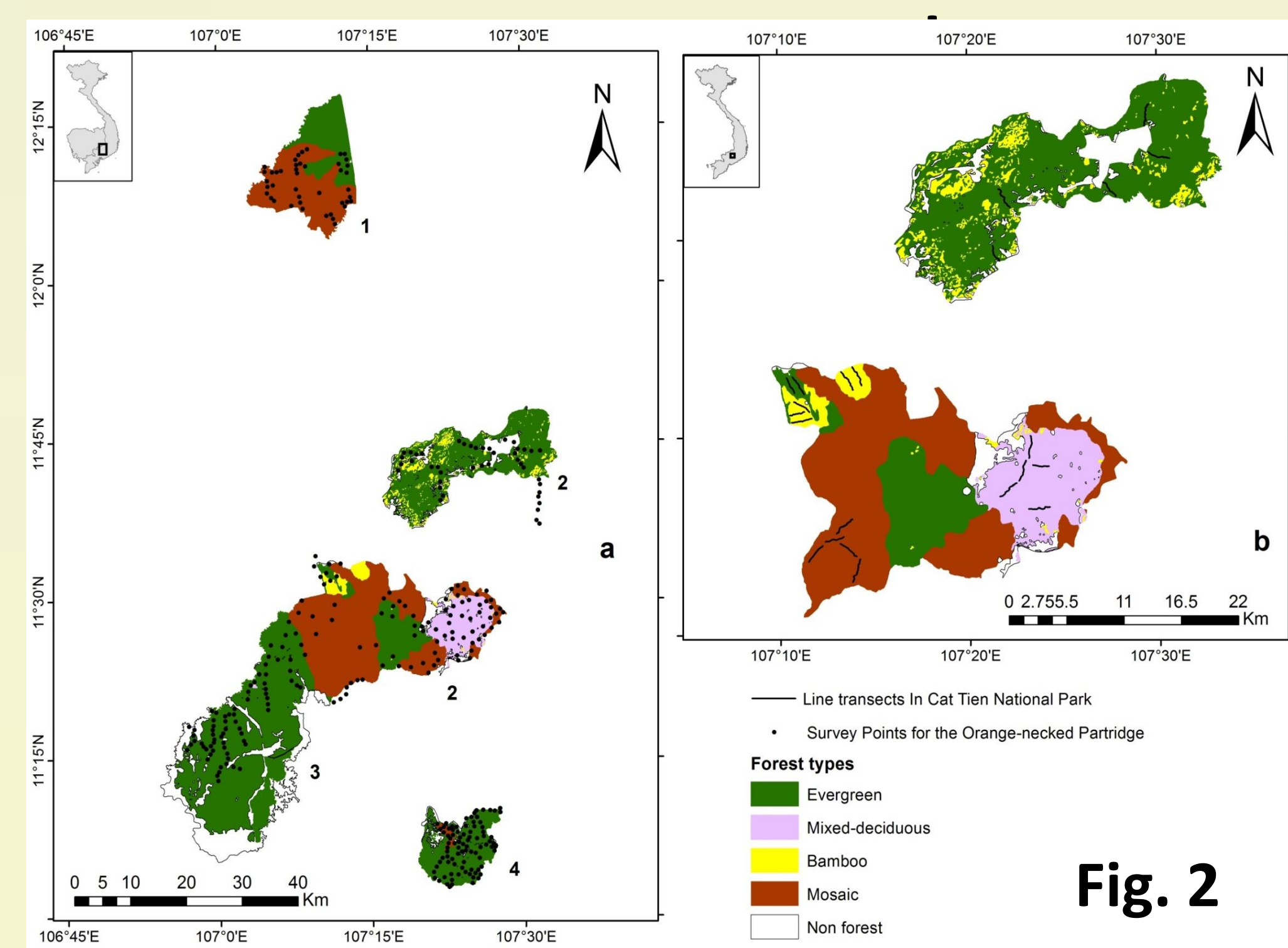
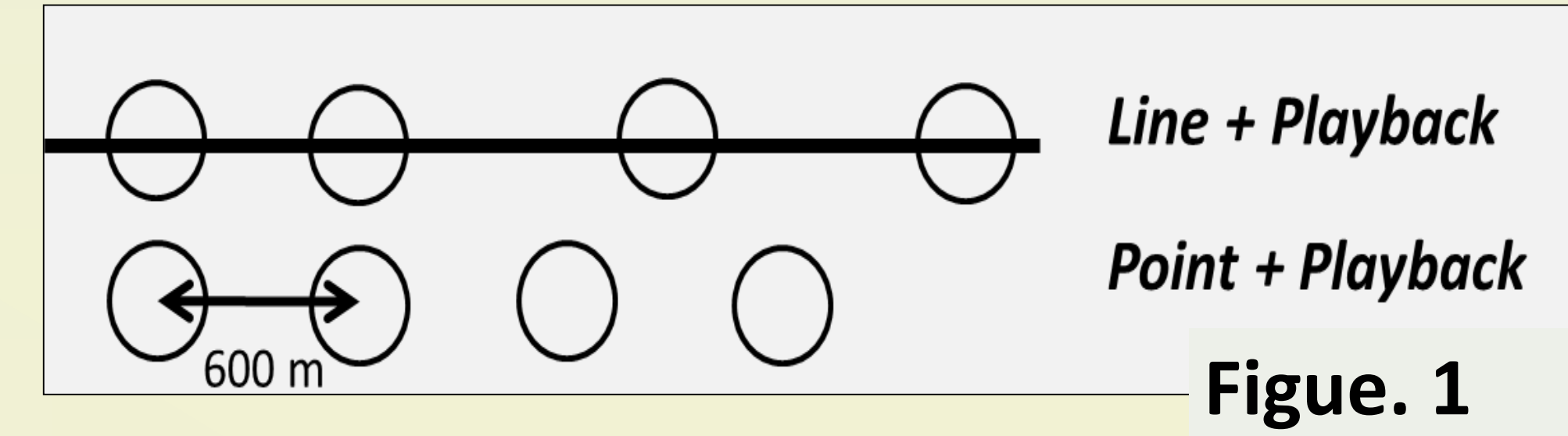
## METHODS

### Data collection

1. Data from 22-2km-linetranssects in 4 forest types: evergreen, mix-diciduous, bamboo, mosaic (patches of the three previous forest types) in Cat Tien National Park for density estimation (Fig. 2, b) (2014)
2. Data collected in 4 protected areas (from 2000 – 2008) in Southern Vietnam (Fig. 2, a) using point count & linetranssect with playback (2 minutes playback/ location). Distance between two points: at least 600 m to avoid double count (Fig. 1)
3. Habitat use of ONP: 4 environmental variables were tested: forest types, elevation, slope, and distance to water.

### Data Analysis

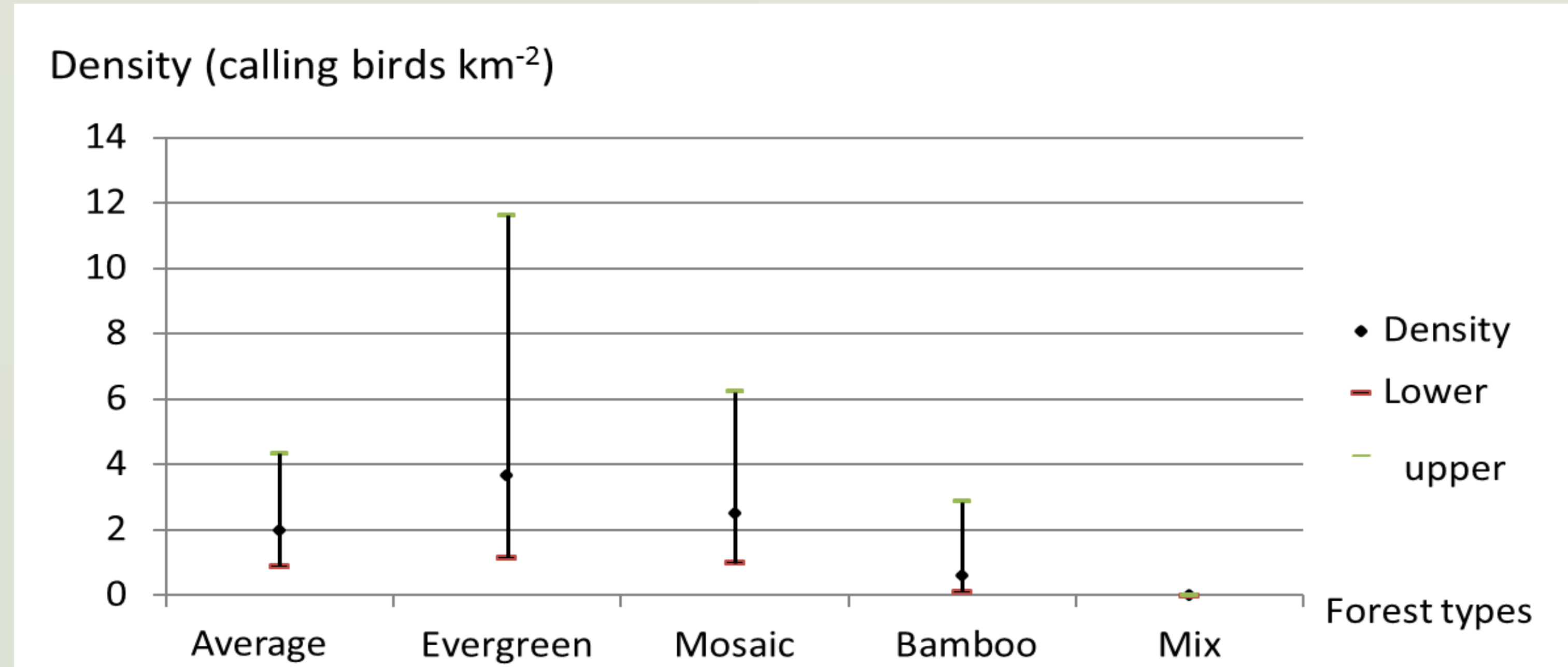
1. Using distance sampling (data set 1) to estimate density of ONP.
2. Using multilevel logistic regression (random effect was the detection method) to assess the ONP's habitat use.
3. Based on habitat use & historical detections, a potential historical range of the ONP was predicted.
4. Lacking of detailed mapping of specific forest types in the past, the ONP's range decline over the last 70 years was estimated by comparing total forest cover between 1943 and 2015.



## RESULTS

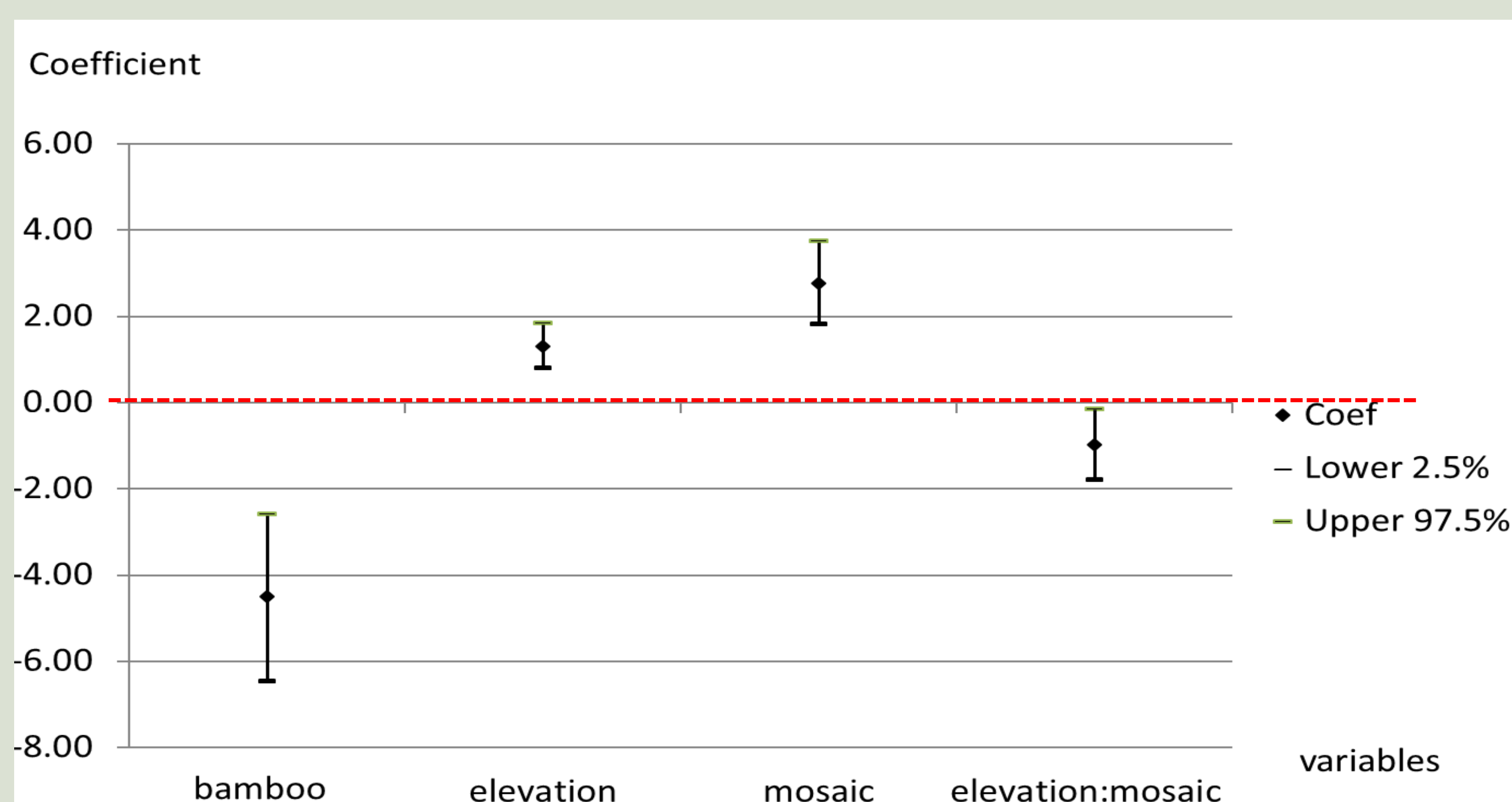
### 1. Density estimation

ONP's density: high in **mosaic**, **evergreen** in **high elevation** areas but low in bamboo; and not in mixed deciduous forest (due to flat terrain, low-lying & could be presence of Green-legged Partridge in this forest type)

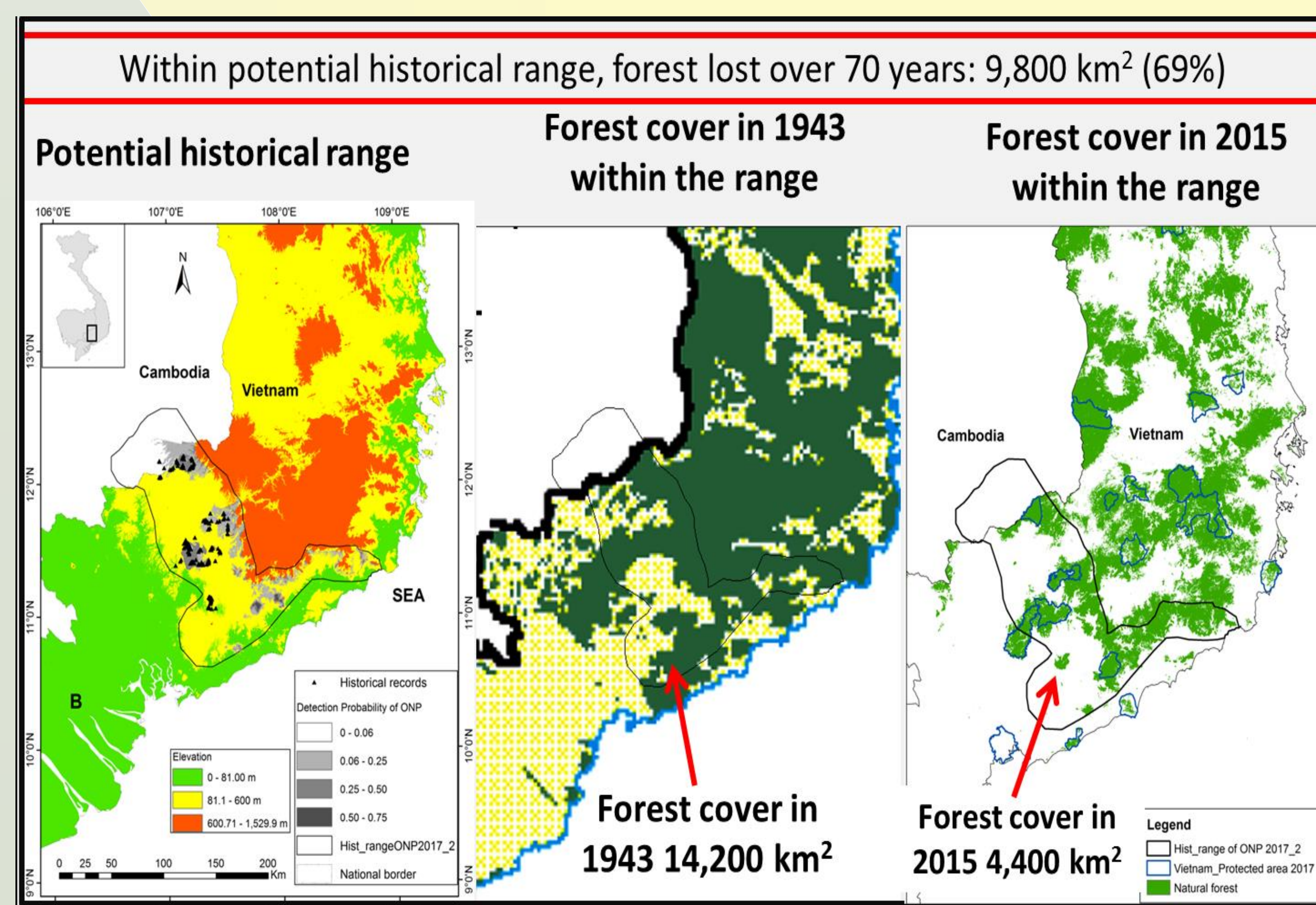


### 2. Habitat preference

Elevation and forest types were main factors influencing the presence of Orange-necked Partridge in that the species was restrained to rolling hills at an elevation range lower than 600 m.



### 3. Potential historical range and its declining over the last 70 years



## CONCLUSIONS

1. The population of Orange-necked Partridge in Cat Tien National Park perhaps somewhat lower than they should be.
2. The species was restrained to rolling hills at an elevation range lower than 600m and tended to avoid bamboo forest.
3. Their potential historical range declined almost 70% over the last 70 years.



Orange-necked Partridge (ONP) (*Arborophila davidi*)