

Contents

	Page
Abstract	v
Acknowledgements	x
Contents	xi
List of Tables	xii
List of Figures	xiv
Chapter	
1. Introduction	1
1.1 Background and rationale	1
1.2 Review of literature	4
1.3 Objectives for study	7
1.4 Background information for study area	8
1.5 Road map of the present study	9
2. Methodology	10
2.1 Data source and data management	10
2.2 Graphical methods	13
2.3 Statistical methods	13
3. Bird abundance in the Thale Noi non-hunting area	17
3.1 Studies completed	17
3.2 Published paper on the first study	18
3.3 Published paper on the second study	27
3.4 Results on the third study	34

	Page
3.5 Discussion on the third study	38
4. Discussion and Conclusions	41
4.1 Overall finding	41
4.2 Implication of the study	48
4.3 The limitations and suggestions for further study	49
References	51
Vitae	60

Prince of Songkla University
Pattani Campus

List of Tables

Tables	Page
Published paper on the first study	
Table 1 Daily incidence rates (individuals/day) of resident species in Thale Noi: 2004-2007	21-22
Table 2 Incidence rates (per 7-hour day) for all 49 resident species by site and season: 2004-2007	23
Table 3 Land use (km ²) in each site within a 6-km radius	24
Published paper on the second study	
Table 1 Results of the factor analysis listing the rotated factor-loading matrix for the five-factor solution	32

List of Figures

Figures	Page
Figure 1.1 Study sites in the Thale Noi non-hunting area, Southern Thailand: Khuan Kreng (1), Khuan Nang Whean (2), Khuan Thale Mong (3), Klong Yuan (4), Khuan Khi Sian (5), Ban Pran (6) and Leam Din (7)	9
Figure 2.1 Path diagram for data management	12
Published paper on the first study	
Fig. 1 Study sites in the Thale Noi non-hunting area, southern Thailand: Khuan Kreng (1), Khuan Nang Whean (2), Khuan Thale Mong (3), Klong Yuan (4), Khuan Khi Sian (5), Ban Pran (6) and Leam Din (7)	20
Fig. 2 Mosaic plot showing distribution of overall incidence rates of resident species by site and season: 2004-2007, areas of rectangular tiles indicate bird abundance	23
Fig. 3 Bubble charts showing distribution of incidence rates of 49 resident species by site (left panel) and by season (right panel), circles indicate bird abundance; number are given for incidence rates greater than 500 per day	25

Published paper on the second study

- Figure 1: The Thale Noi Non-hunting area with study areas and sampling sites: 1-7, Thale Noi is the single lake in the study area and is surrounded by the 7 sampling sites: 1-3 are located in Nakhon Si Thammarat, :4-5, and 7 are located in Phatthalung and 6 is located in Songkhla, southern Thailand. Sites 1, 3, and 5 are mainly swamp forest. Site 2, 4, and 6 are mainly rice filed. Site 7 is mostly seasonally-flooded grassland. 30
- Figure 2: Box plots showing distributions of incidence rates of the 23 resident bird species, ordered by median incidence rates. Horizontal bars cover 50% of each distribution between the lower and upper quartiles. Black vertical stripes show median incidence rates. Black dots show outliers. 30
- The third study
- Figure 3.1 Box plots showing distributions of incidence rates the 23 resident bird species, black and grey vertical stripes show median and mean incidence rates, respectively, black dots show outliers, The labeled species(*) show they have zero numbers for at least 25% incidence rate calculated. 35
- Figure 3.2 Residual plots for negative binomial and log-linear models 36
- Figure 3.3 Daily incidence rates for each bird species adjusted for season and site factors 37
- Figure 3.4 Adjusted incidence rates by site (left panel) and season (right panel) 38