Satellite Tracking of Bird Migration

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Migration of Birds

Photo: Lee Ilbum
1. Bird Banding Programme

- To study migration route of birds
- Since 1924 in Japan
- 4,390,000 birds were ringed until 2007
- 28,800 recoveries
- Yamashina Institute for Ornithology and Ministry of Environment

Photo: I. Nakajima
Bird Banding Programme in Japan

Number of bird banded
Number of bird recovery

Programme of Ministry of Environment conducted by Yamashina Institute for Ornithology
Result of Banding

Rufous-necked Stint
*Calidris ruficollis*

Dunlin
*Calidris alpina*

Yamashina Institute 2005
For Gray Heron, Hooper Swan and Crested Ibis

Photo: Yamashina Institute

Y. Oosawa
Izumi, Wintering site of Cranes in Southern Japan
Crane Migration Study in 1987
Wild Bird Society of Japan

Izumi, Kagoshima
Busan
4. Satellite Tracking

• Argos System
  Argos Data Collection and Location System
  401.65 MHz±1.2 kHz

• GPS
  Global Positioning System

• PTT
  Platform Transmitter Terminal
  200 grams to 10 grams
Network Sites as of August 2005

RUSSIA
1 Kytalyk
2 Khingansky/Ganukan
3 Daursky
4 Lake Khanka

MONGOLIA
5 Daguur
25 Ugtam
26 Khurkh-Khuiten

CHINA
6 Sanjiang
7 Xingkai Hu
8 Zhalong
9 Xianghai
10 Shuangtai Hekou
11 Yellow River Delta
12 Yancheng
13 Shengjin Hu
14 Poyang Hu
15 Cao Hai
29 Dalai Lake
30 Dashanbao

DPR KOREA
16 Kumya
17 Mundok

RO KOREA
18 Cholwon
19 Han River Estuary
27 Gumi-Haepyung
28 Suncheon Bay

JAPAN
20 Kiritappu
21 Akkeshi-Bekanbeushi
22 Kushiro
23 Yashiro
24 Izumi-Takaono
Launch of Crane Flyway Network
2001  China
Satellite tracking of Black-faced Spoonbill

Wild Bird Society of Japan

Photo: K. Ozaki
Migration Study of Short-tailed Albatrosses *Diomedea albatrus*

- Started in 1996
- Torishima to Aleutian Islands
- Yamashina Institute for Ornithology
- How to attach
5. Data Logger System

- Tracking whale diving way
  Sperm Whale,
  *Physeter macrocephalus*

- Bio-logging Science,
  Tokyo University

- Geolocation tag,
  Lotec, Canada

By: Tokyo Univ.
Contribute to Bird Flu Problem:

1. Banding → Only two sites (capture and recovery
2. Color Ring → Observer
3. Motor Glider → Passport
4. Algos GPS → Migration routes of birds
   Heavy and Expensive
5. Data Logger → Re-capture the bird
   Inexpensive

• What new?
Thank you