Researchers in Thailand discovered the migration ecology of two Asian Sparrowhawks

Story by Dr.Kaset Sutasha

Photos by Philip D. Round, Andrew J. Pierce, and Chukiat Nualsri

The Researcher team in Thailand included Associate Professor Philip D. Round, Department of Biology, Faculty of Science, Mahidol University (MU), Mr. Andrew J. Pierce, Conservation Ecology Program, School of Bioresources and Technology, King Mongkut's University of Technology Thonburi (KMUTT), Mr.Kriangsak Sribuarod, head of Klong Saeng Wildlife Research Centre, Wildlife Research Division, The National Parks, Wildlife and Plant Conservation Department (DNP), Mr. Chukiat Nualsri, Chairman of the Flyway Foundation, and Dr.Kaset Sutasha, Chairman of Bird Conservation Society of Thailand (BCST).

The team studied the migration ecology of two Asian sparrowhawks (Chinese and Japanese Sparrowhawks, *Accipiter soloensis* and *A. gularis*) at Khao Dinsor, Pathio District, Chumphon province about 450 kilometers (km) south from Bangkok, by using solar- powered satellite tags. The project have been mainly supported by The National Science and Technology Development Agency (NSTDA), Ministry of Higher Education, Science, Research and Innovation (MHESI), Mr. Jonathan Murray, and Mr.David Bond provided further financial assistance.

Associate Professor Philip D. Round and Mr. Andrew J. Pierce conducted the project by using the mist net to trap Sparrowhawks which fly across Khao Dinsor during September - October from 2016 – 2021 and then the birds were fitted with satellite tags.



The solar satellite tag which was only 4% of the Sparrowhawk's body weight, was put on the bird's back. Four Chinese Sparrowhawks and five Japanese sparrowhawks were tagged. The technique gives locations accuracy for 0.5-1.5 km, so their migratory route could be tracked via the website, http://www.argos-system.org or Application CLS view.

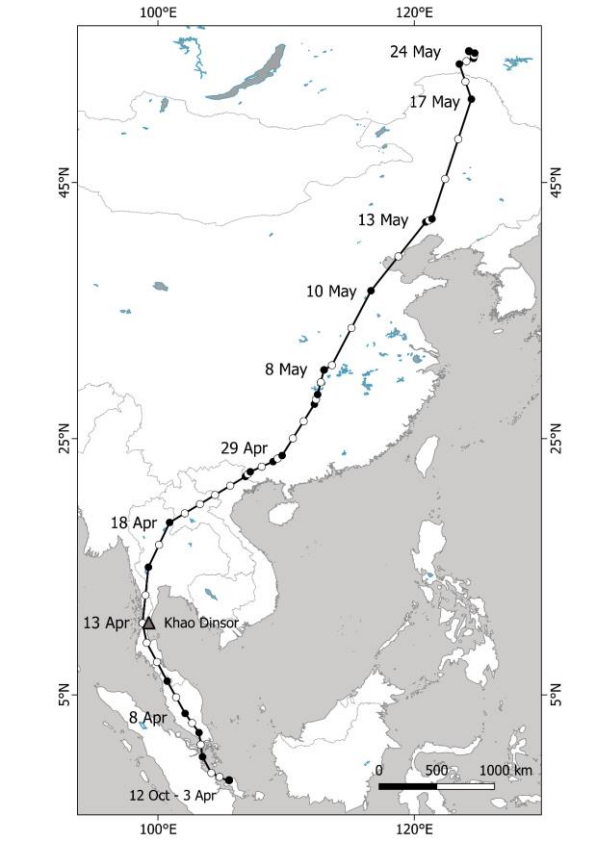


Then migratory routes of these two Sparrowhawks were discovered in detail for the first time.

The photo showed the migratory route of one Chinese Sparrowhawk (Fern) by Researchers in Thailand



Tagging Japanese Sparrowhawks in 2017-2018, the researcher team found that the birds traveled to Sumatra and Borneo during winter and spent 130 - 170 days before traveling back North. One bird that wintered in Bangka Island (Indonesia) traveled to Amur (eastern Russia) its presumed breeding grounds. This migratory route was 7,699 km in 50 days, such that a round trip was 14,532 km which is longer than the Earth's diameter.



This figure showed the south to north migratory route, which was from Indonesia (wintering ground) to Russia (breeding ground).

Mr. Chukiat Nualsri and Mr. Kriangsak Sribuarod said that “Khao Dinsor, Pathio District, Chumphon province or Hawk Mountain of Asia is one of the top 5 best observation spots for raptors and other migratory birds in the world” Khao Dinsor is located next to the coastal, reaching 350 meter above sea level, and is surrounded by forest about 320 hectares. Due to the abundance of natural habitat, this spot is a resting point for migratory birds during their travel along the East Asian - Australasian Flyway (EAAF) which is the safer track of raptor and other migratory birds for traveling to the South (warmer climate) of the Southeast Asia, than flying across the ocean which is riskier.



Moreover, Khao Dinsor locates close to the Kra Isthmus which is the narrowest part of southern Thailand and the continent of Asia, so the raptor and other migratory birds normally use this track for migration, and their population has a higher density than other part of Asia.



In 2009, the Flyway Foundation, Klong Saeng Wildlife Research Centre, Wildlife Research Division, The National Parks, Wildlife and Plant Conservation Department (DNP), and both Thai and foreigner volunteer collaborated to count and identify raptors at Khao Dinsor, About 38 species were recorded annually from September - November. In total, annually, are about a million migratory birds travel across this area including both raptors and non-raptors.





The most common raptors are Chinese Sparrowhawk and Black Baza. In some years, numbers of these two species exceed 500,000 individuals. Each raptor has a unique migrating pattern which is shown by the data collected each year at Khao Dinsor. For example in mid-August, Japanese Sparrowhawk starts its migration, then Chinese Sparrowhawk and Oriental Honey-Buzzard are the next species to join the annual migration. The density of migrating birds increases from September - October and continues until early November.

Dr.Kaset Sutasha said the bird in a Photo was named *Indi*. She is a female Japanese Sparrowhawk, which was tagged (using solar satellite) by Mr. Andrew J. Pierce at Khao Dinsor, Pathio District, Chumphon

province or Hawk Mountain of Asia, on 27th September 2020. Her destination was Borneo, Indonesia via the Thai-Malay Peninsula







This is the most exciting news which the research team in Thailand has found out the secret of nature twice. The data is important for conservation planning for migratory birds in the future, to effectively prevent habitat loss in Russia, Thailand, and Indonesia. Moreover, the information can be used for raising public awareness of raptors, and their threats. As we know wildlife hunting, forest destruction and forest fires are still a big issue in the reduction of migrating bird populations in many countries and will lead to

extinction if we still do not accept the concept of “Human-Bird co-existence”.

Indi has travelled more than 7,155 km, and now she reaches her hometown in Russia. This journey is fascinating, she weighs only 150 gram about the size of a Spotted Dove but she has great patience and perseverance to bring herself back home during a adventure long distance, across Indonesia, Singapore, Malaysia, Thailand, Lao, Vietnam, China, Mongolia, and Russia. More fascinating story is in coming August 2021 Indi and her friends will start next long journey from Russia to Indonesia again and again, just following their instincts, until the end of life.

“If you ever feel hopeless, please think about *Indi* and her journey!.”