

Islands in Flux: The Andaman and Nicobar Story. Pankaj Sekhsaria. Harper Litmus, An imprint of Harper Collins Publishers, A-75, Sector 57, Noida 201 301. 2017. xxx + 268 pages. Price: Rs 399. ISBN: 9352643984.

Island systems have attracted the attention of biologists and geologists since a long time. Some of the key concepts in biology, say ideas on evolution by Charles Darwin and Alfred Russel Wallace originated by observing patterns of island biodiversity. Not many countries have access to islands for research, but with the magnificent Andaman and Nicobar (A&N) Islands, we do. The A&N Islands, an archipelago in the Bay of Bengal, has 349 islands with the Andaman group consisting of 325 islands and the Nicobar group 24 islands. The Andaman group of islands is characterized by Indo-Malayan biota, whereas the Nicobar islands are characterized by Indonesian biota and form a part of the Sundaland mega-biodiversity hotspot as well. Sporadic scientific literature is available on the biodiversity, geology and anthropology of the islands. The book under review is a 'one-stop place' to acquire knowledge about the wealth and history of the A&N Islands.

The author Pankaj Sekhsaria, a researcher and environmentalist, has been closely studying the islands for more than two decades. The book presents a collection of articles by him over two decades which appeared in various newspapers, magazines and also papers presented at several conferences. In this review, we will undertake a journey through time giving a glimpse of various events that took place on the A&N Islands as described by the author.

Overall, the book provides a clear picture on how these fragile ecosystems are mismanaged and pushed to the verge of an irrevocable state in terms of indigenous people and biodiversity. It all started with the first survey of A&N Islands in 1789 by Lieutenant Archibald Blair in order to establish a small settlement during the wartime for the fleets. In 1858, a prison was set up at Port Blair for criminals and freedom fighters. The second chapter of the book offers a detailed overview of timber extraction, a major destruction to the area with quantitative data over the years. The Chatham Saw Mill, Asia's biggest sawmill is evidence for the voluminous timber extraction. It is surprising, rather shocking, to know that 0.01% land mass of the Asia has the biggest sawmill in the continent.

The tropical forests of the A&N Islands have been victim to timber operations for years now. The diversity and endemism of these Islands have not yet been fully uncovered. Being a tropical island, there are various habitats ranging from coral reef to tropical rainforests supporting diversity on the Island. Some studies have revealed the huge diversity of corals. Around 50% of the plants and animals that grow here are endemic. Many taxa have not even been studied for baseline information. It is sad to know that such areas which are rich in biodiversity and endemism, and whose diversity is not completely revealed are subjected to uncontrolled disturbances like timber extraction and populating beyond the carrying capacity which may have destroyed some species before they could even be documented.

Due to developmental activities, the island fauna is also affected. The islands are breeding grounds for various turtles like giant leatherback, green sea, hawksbill and Olive ridley turtle. With more than 1000 nesting individuals, the A&N Islands are among the four global sites with such huge turtle nesting. Sekhsaria describes that, in the recent years, they are facing several anthropogenic disturbances such as pollution, getting trapped in fishing nets, hunting for meat, destruction of beaches and population growth. However, he mentions that a considerable amount of problem is from dogs which dig up and destroy the turtle eggs and cause stress to the nesting adults. Apart from dogs, details of introduced species and their effect are well illustrated under the title 'An exotic pro-

blem'. On the one hand, where human activities are putting a lot of pressure on the unique plant and animal diversity on the Islands, there are also examples of how legal protection of wildlife can lead to its own destruction, a peculiar story with the 'edible-nest swiftlet'.

One of the major components (chapters 7–13) of the book are the writings about various native communities that have inhabited the A&N Islands for thousands of years. The four main indigenous communities are the Jarawas, Onge, Great Nicobarese and Sentinels. According to 'Andaman and Nicobar Protection of Aboriginal Tribes Regulation', the entire Little Andaman island was reserved for tribal people; however, nearly 30% of the land has already been used for other activities such as timber extraction and red oil palm plantation. Various activities were undertaken in the name of 'welfare', such as rice, dal, oil and biscuits were introduced to the people traditionally eating meat of wild boar, turtle, fish, tubers and honey; each adult was offered 250 g of tobacco, and wooden houses with asbestos roofing were built for the Onges which are not suitable for the hot and humid climate. Also, attempts were made to introduce cash economy among the community which is not even practising barter system. Sekhsaria's description of the conditions of the tribal people shows the unseen side of the Islands and how uncivilized we are.

In general, the attitude of the administration as well as the settlers towards the tribals is not good and the book captures this point wherever possible. The author narrates many incidences which makes the readers aware of the current situation of the native people. Chapters 10 and 11 provide details of the dramatic events that happened in order to protect the Jarawas and bring them to the 'so-called'



Hermit Crab, South Sentinel Island, 1998.

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mainstream, which ultimately did not do any good to them. The natives have seen a drastic population reduction and exposure to many diseases since more people started settling down on the Islands. To sustain this population, forests were cut down and land was used for settlements and agriculture. The author has described the situation of the tribal communities in great detail; this book may be the first documentation of the life of these indigenous communities in such a detailed manner.

Tourism is another major source of destruction of these fragile islands. Every year a large number of tourists visit the Islands (thanks to Government subsidies), putting more pressure on this delicate ecosystem. Chapters 18 and 22 speak about two different incidences related to tourism which are interesting. Numerous orders by the Supreme Court in favour of the environment and their non-compliance by the local administration are really disturbing; the book provides a detailed list of these orders.

The author associates several problems with the construction of the 340 km-long Andaman Trunk Road (ATR), which runs through the heart of Jarawa settlements. Due to increasing encroachment in and around the area, more forests are being cut down affecting the overall ecosystem as well as the well-being of the Jarawas. Despite orders to close down the ATR in 2002, the local administration seems to be ignoring them. In 2003, the Supreme Court had ordered to close down parts of the ATR which passed through Jarawa territory. ATR is a convenient route for tourists and the conflict is difficult to resolve. A photograph of Jarawa women begging for food along the ATR in this book is disturbing and illustrates the unfortunate situation of the native people.

Political agenda seems to be development-oriented, ignoring the ecosystem as well as the native people. Environmentalists are fighting to restore or at least conserve what is left. The local administration is turning a deaf ear to environmental problems and problems of the native people. Chapter 23 talks about what happened during the visits by various Presidents of India. The military is also gaining interests, especially in the Nicobar Islands.

This book emphasizes that it is important to evaluate the consequences of development. Unsustainable ways of

development have proven to be catastrophic to the natural systems. The land-use changes, population growth, unsustainable use of natural resources in the recent past and disastrous effects of the tsunami have left the A&N Islands fragile. Immediate action-oriented plan for sustainable development is extremely important for the future of the Islands. This book also lists five appendices which describe the laws, policy and timeline of the A&N Islands that are vital to understanding the history and political issues of the Islands. Twelve boxes spread across the book are filled with information ranging from origin of the names of places on the Islands to policy related to indigenous people to turtle biology and endemic biota. Photographs in the middle portion of the book are representative of the major topics covered, such as forests and biodiversity, timber extraction and interaction between tribal people and tourists.

The book is an advisable read for all Government employees who get posted in the A&N Islands, including the military personnel. Using previous experiences which the author narrates in detail, the decision makers can make correct choices in the future. This book will also be of interest to social science students and any enthusiast who would like to know more about the Islands than simple tourism. Additionally, this book will serve as an important reading material for anthropologists, as there is notable information provided about the indigenous people and issues related to them. It can also serve as a good course material for environmental laws and management courses. The author never hesitates to point out the impracticable visions of the administration with regard to tourism, military, tribal affairs and biodiversity conservation. Finally, we recommend that all flights and ships to Port Blair from the mainland should hand over chapters from this book as a part of on-board magazines, especially to the 'subsidized tourists', as parts of this book are as important as safety protocols in the flight seat pouches.

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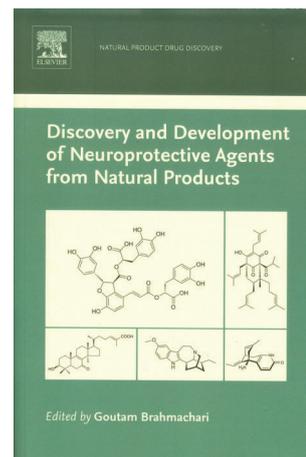
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Discovery and Development of Neuroprotective Agents from Natural products: Natural Product Drug Discovery.

Goutam Brahmachari (ed.). Elsevier, Radarweg 29, PO Box 211, 1000 AE Amsterdam, The Netherlands. 2018. xxiii + 465 pages. Price: US\$ 200.

This book discusses about recent developments in the area of neuroprotective natural products with respect to their isolation, characterization, and their pharmaceutical applications in the area of neurodegenerative diseases. In the first of 12 chapters, the author gives a brief outline of the book and summarizes the contents presented in each chapter.

Chapter 2 provides details regarding the natural phytoestrogen showcasing their promising neuroprotective activities against Parkinson disease. Phytoestrogens are a group of compounds found naturally in plants which exhibit similar structural and chemical properties like 17β -estradiol. The antioxidant and anti-inflammatory activities along with neurotropic signalling pathways induced by phytoestrogens are discussed. Additionally, neuroprotective effects of various flavonoids such as quercetin, myricitrin, kaempferol, morin, etc. and isoflavonoids such as daidzein, puerarin and biochanin A are discussed in detail.

Chapter 3 is about Alzheimer's disease (AD) and its treatment using natural products and their derivatives. In the beginning there is a brief introduction about AD followed by a discussion on current treatments using natural products and their derivatives, based on cholinesterase inhibitors (ChE-Is), a group of drugs used for mild to moderate AD. The three most commonly used drugs are galanthamine, donepezil and rivastigmine.