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Cover: *Saproamanita praeclara*: Sporocarp in habitat © Kantharaja. R.



## Philately of mangroves: local to global reflection

**Mahesh Shindikar<sup>1</sup> , Yogesh Deshpande<sup>2</sup> , Prasad Kulkarni<sup>3</sup> , Anand Billade<sup>4</sup>  & Ajit Vartak<sup>5</sup> **

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**Abstract:** Philately is one of the most popular hobbies since its inception and there are millions of known philatelists across the globe. Other than just a hobby, it can also be seen as a tool for reflecting social, political, natural specialities of the country for internal and external demonstration. It is an effective medium to display the richness of natural diversity, customs, and traditions and also the man-made wonders for its users. Stamps and other philatelic items can be viewed as conservation tool. They not only sensitize the public to the fate of the threatened environment or biota but also help in raising funds. Mangroves represent one of the most diverse coastal ecotonal wetlands of tropics and subtropics. They are the ecosystems inhabited by diverse group of floral, faunal, and microbial elements. Though neglected initially, these forests have attracted the global attention after understanding their role in coastal ecology and economy. The current study is a modest attempt to use themed philately to investigate the unique representation of the world's most diversified mangrove ecosystem. With this goal in mind, a systematic spatio-temporal review of philatelic publications was conducted, and the results are presented along with the available data and alternative interpretations.

**Keywords:** Awareness, diversity, educational tool, mangrove forests, philatelic material, postal stamps and covers, public awareness.

**Marathi:** खारफुटीवरील टपाल तिकिटांच्या संग्रहाचा अभ्यास: स्थानिक ते जागतिक प्रतिबिंब

टपाल तिकिटांचा संग्रह हा सर्वात लोकप्रिय छंद आहे आणि जगभरात लाखो प्रसिद्ध तिकिट संग्रहक आहेत. केवळ छंदाशिवाय, देशाच्या सामाजिक, राजकीय, नैसर्गिक वैशिष्ट्यांचे प्रतिबिंबित करण्याचे साधन म्हणून देखील याकडे पाहिले जाऊ शकते. नैसर्गिक विविधता, चालीरीती आणि परंपरा यांची समृद्धता तसेच मानवनिर्मित स्थळे प्रदर्शित करण्यासाठी हे एक प्रभावी माध्यम आहे. तिकिट आणि इतर छायाचित्रण वस्तू संवर्धनाचे साधन म्हणूनही पाहिल्या जाऊ शकतात. ते केवळ लोकांना पर्यावरणाच्या भवितव्याबद्दल संवेदनशील करत नाहीत तर निधी उभारण्यातही मदत करतात विविध नैसर्गिक स्रोतांचे अंकन टपाल तिकिटांवर आवर्जून केलेले दिसते. खारफुटी ही जगातील उष्ण आणि समशीतोष्ण कटोबंधातल्या किनारी भागात आढळणारी विविधतेने नटलेली पाणथळ भूमी म्हणून परिचित आहेत. खारफुटी ही वनस्पती, प्राणी आणि सूक्ष्मजीव यांनी समृद्ध अशी परिसंस्था आहे. पूर्वापार दुर्लक्षित झालेली ही वने आज मात्र किनारी भागातील त्यांच्या पारिस्थितीकीय आणि आर्थिक लाभांचा विचार करता जगाच्या आकर्षणाचा विषय बनला आहे. प्रस्तुत शोधनिबंधाचा उद्देश हा जगातील अतिशय वैविध्यपूर्ण म्हणून नावाजलेल्या खारफुटीची परिसंस्था व त्यातील घटकांचे टपाल तिकिटांवरील प्रदर्शन कसे झाले आहे याचा धांडोळा घेण्याचा एक प्रयत्न आहे. जगभरात आणि विविध कालक्रमात खारफुटी परिसंस्था आणि त्यातील वनस्पती, आकर्षक फुले, जलचर प्राणी, स्थानिक किंवा स्थलांतर करणारे पक्षी यांचे सुरेख मुद्रण या तिकिटांवर झालेले दिसते. प्रकाशित टपाल तिकिट आणि साहित्याच्या माध्यमातून त्याचा शास्त्रीय अभ्यास करणे हा या अभ्यासाचा मुख्य उद्देश आहे.

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## MANGROVES ON POSTAGE STAMPS

Mangroves are significant occupants of the ecotonal zone that separates the marine and terrestrial worlds. A group of salt-tolerant plants constructed the entire ecosystem. Through the fisheries and tourism sectors, mangrove forests play an important role in coastal ecology and resilience, as well as a sustainable living and a thriving economy. Mangrove forests are perceived as land builders, coast protectors, nutrient sources, sources of food and fodder, homes for the aquatic organisms and migratory birds. Recent studies have highlighted their contribution to carbon sequestration, nutrient cycling, and wastewater treatment, which motivates them to safeguard their coastal lifestyle. As a result, understanding, protecting, and conserving this valuable ecosystem with all of its components is critical for long-term growth. Since awareness is the first step in conservation, it is believed that a number of proactive efforts in this direction should be made on a priority basis in order to preserve the diversity and utility of this environment.

This paper reviews a total of 172 postage stamps and four covers (1 first day cover, 1 special commemorative cover, and 2 special covers) and associated postal publications from 37 countries. This study considers the representation of mangroves that reflects the diversity of flora and fauna with social and economic perceptions of each country. These are Angola, Bahamas, Bangladesh, Bermuda, Brazil, Brunei, Cayman Island, Cuba, El Salvador, Federated States of Micronesia, Fiji, Grenada Grenadines, India, Indonesia, Japan, Kiribati, Macao, Malaysia, Mauritius, Mexico, New Caledonia, Palau, Papua New Guinea, Peru, Republic Togolaise, Samoa, Senegal, Solomon Island, Sri Lanka, St. Lucia, St. Vincent, Suriname, Swaziland, Taiwan (ROC), Tanzania, Tonga, and Wallis-Futuna.

Although plants and animals have appeared frequently on stamps since 1939, it was only in 1970

that St. Vincent, a southern Caribbean nation published a stamp showing mangrove associated Green Heron *Butorides virescens*, similarly another one showing a mangrove twig and mangrove Cuckoo *Coccyzus minor* as associated avifaunal member. The same stamp was reproduced by Grenadines of St. Vincent in 1974.

In the 1980s, eight countries, namely, Cayman Islands, Macao, Grenada Grenadines, Swaziland, Saint Lucia, Sri Lanka, Solomon Island, and Palau, published stamps related to mangroves.

The Cayman Islands published two stamps in 1980, one on seed of the Red Mangrove *Rhizophora apiculata* and the other one on the Mangrove Crab *Goniopsis cruentata*, which were depicted in sheltered habitats from dense network of aerial roots of the *Rhizophora* tree. Later in 1982, a stamp was published on the blooming of Red Mangrove *Rhizophora mucronata*.

Macao in 1983 published a stamp showing the mangrove under the theme of medicinal plants. A flowering twig of *Acanthus ilicifolius* L. commonly known as Holy Mangrove is shown in this stamp. It has been used for the treatment of asthma, diabetes, dyspepsia, leprosy, hepatitis, paralysis, snake bite, rheumatoid arthritis and a diuretic. (Bandaranayake 1998).

In the 1985 Grenada Grenadines, Swaziland, & Saint Lucia published a first day cover (as a miniature sheet) and stamps.

Grenada Grenadines published a miniature sheet showing the bird Mangrove Cuckoo on 200<sup>th</sup> anniversary of the birth of John James Audubon. Swaziland on the same occasion published a set of four stamps showing Ground Hornbills *Bucorvus abyssinicus* and a first day





cover on Mangrove Cuckoo *Coccyzus minor*.

Saint Lucia in 1985 published a stamp showing the association of the Mangrove Cuckoo with the Savannes Bay Nature Area, Scorpion Island, Saint Lucia.

Cayman Island in 1986 issued a set of 12 stamps of marine fauna showing *Rhynchocinetes rigens*, *Nemaster rubiginosa*, *Calcinus tibicen*, *Rhodactis sanctithomae*, *Spirobranchus gigantea*, *Diodon holocanthus*, *Pseudocorynactis caribbeorum*, *Astrophyton muricatum*, *Cyphoma gibbosum*, *Condylactis gigantea*, *Malacoctenus boehlkei*, and *Lima scabra*.

Sri Lanka issued a set of four stamps in 1986 showing a sheltered riverine mangrove habitat having a mixed strand of species of the genera *Rhizophora*, *Avicennia*, and *Sonneratia*; a habit of medium-sized tree of *Rhizophora apiculata*; flowering and fruiting of *Bruguiera gymnorrhiza* and a fiddler crab *Uca lactea* representing species of economic significance from mangroves and mudflats.

Solomon Island published four stamps in 1987

showing the Mangrove associated Little Kingfisher *Ceyx pusillus* catching food in a mangrove thicket.

Palau, a Pacific Ocean island has published 20 stamps featuring a red mangrove and associated species (*Rhizophora stylosa* and *Hibiscus tiliaceus*) and the associated fauna of Palau. It was exclusively produced for World Stamp Expo' 1989 and therefore had limited postal use. As a consequence, a philatelic mini-sheet featuring an artistic version of the mangroves and their associated fauna was released. Each individual stamp has a feature of one species of floral or faunal element whose scientific name appears on the back of the sheet. The stamp pane features Bridled Tern, Sulphur Butterfly, Mangrove Flycatcher, Collared Kingfisher, Fruit Bat, Estuarine Crocodile, Rufous Night Heron, Stilt mangrove, Bird's Nest Fern, Beach Hibiscus tree, Common Egg fly, Jingle Shell, Palau Bark Cricket, Common Periwinkle, Mangrove Oyster, Jellyfish, Striped Mullet, Mussels, Aea Anemones, Algae, Snapper, and Cardinal fish.



In the 1990s, twelve countries, namely, Suriname, Mauritius, Fiji, Peru, Malaysia, Solomon Island, Cuba, Federated States Micronesia, El Salvador, Samoa, and Saint Vincent, published stamps on mangroves. Suriname is a small country on the northeastern coast of South America. In 1990 it published stamps indicating mangrove sites by Postal Union of America, Spain, and Portugal (UPAEP).

Mauritius, an Indian Ocean island nation, is known for its beaches, lagoons, and reefs. Mauritius in 1990 issued stamp on *Rhizophora mucronata* on eastern Africa and Indo-Pacific region under the theme Protection of Environment.

Fiji in 1991 issued a set of four stamps of mangrove crabs showing *Scylla serrata*, *Metopograpsus messor*, *Parasesarma erythrodactyla*, and *Cardisoma carnifex*.

Peru is a country on the central western coast of South America facing the Pacific Ocean. In 1991, Peru issued a stamp of riverine mangrove swamps of Tumbes National Sanctuary.

Likewise in 1992, Malaysia published a stamp on the

Mangrove Swamp forest of the Hutan Paya Laut area with a drawing of a tree port of *Rhizophora apiculata* as a dominant species. Solomon Island in 1993 published 15 stamps on crabs. One of the stamps pertains to Mangrove Fiddler Crab *Uca tetragonon*.

Cuba in 1993 published a stamp on endangered fauna from mangrove habitats: Roseate Spoonbill *Platalea ajaja*. Federated States Micronesia in 1994 published four stamps under native flowers. *Sonneratia caseolaris*, commonly known as Mangrove Apple is a species of plant in the family Lythraceae. Flower of the mangrove apple is seen on one stamp.

In 1995, El Salvador published two stamps on mangroves of Pacific coast with American Pygmy Kingfisher and Green Kingfisher (*Chloroceryle aenae* and *Chloroceryle americana*).

Brunei in 1997 published three stamps on mangroves flowers of *Acanthus ebracteatus*, *Lumnitzera littorea*, and *Nypa fruticans*.

In 1998, Samoa published a series of four stamps under the theme 'Environment-Mangroves' showing various stages of life cycle (habit, sapling, aerial root network and viviparous seedlings ready for the dispersal) of a mangrove species *Bruguiera gymnorhiza*. Moreover, Saint Vincent in 1999 published a stamp showing the mangrove tree, a species of *Rhizophora* and the bird White Ibis *Eudocimus albus*.

In the 2000s, 16 countries, namely, New Caledonia, Tonga, Mexico, Palau, India, Senegal, Tanzania, Brazil, Malaysia, Fiji, Taiwan, Bermuda, Indonesia, Angola, Japan, and Sri Lanka published stamps on mangroves. Likewise, New Caledonia in 2000 published a stamp depicting the aerial view of Namelle Caledonie mangrove reserve forest that represents a heart shape.

In 2001, Tonga published five stamps on animals of mangrove swamps on World Environment Day. The animals include fiddler crab *Uca* sp., Motuku Reef Heron







*Egretta sacra*, Black Duck *Anas superciliosa*, Grey Mullet *Mugil cephalus*, Mangrove Crab *Aratus pisoni*, and Emperor Fish *Lutjanus seba*).

Mexico in 2002 published definitive issue covering 24 stamps of which two depict mangroves and lake-lagoon conservation. Out of 18 flower stamps published by Palau in 2002, one depicts flower of *Sonneratia alba*.

India, which hosted the 8<sup>th</sup> Conference of Parties (COP) in 2002 has published a commemorative set of stamps on mangroves. These stamps depict four common Indian

mangrove species *Rhizophora mucronata*, *Sonneratia alba*, *Nypa fruticans*, and *Bruguiera gymnorhiza* on the background of various mangrove forest habitats like rivers, rocks, intertidal islands, back mangroves and a cover carrying an abstract art of work on the need for action on climate change by Kamalleshwar Singh with a conference logo (<https://www.istampgallery.com/mangroves/>).

In same year of 2002, Senegal published a stamp on mangroves on ecotourism theme. Tanzania in 2003,

published two stamps on Rufiji Delta view and mangroves of coast.

Brazil in 2004 published a set of five stamps under the theme of preservation of mangroves and marine zones. It depicts a Roseate Spoonbill *Ajaia ajaja*, Great Kiskadee *Pitangus sulphuratus*, Burrowing Crab *Chasmagnathus granulata*, Little Wood Rail *Aramides mangle*, and Red Mangrove Crab *Goniopsis cruentata*.

Mexico in 2004 again published definitive issue covering 24 stamps of which two depict mangroves and lake-lagoon conservation.

In 2004, Malaysia published total five stamps showing the mangroves on the occasion of 100 years of 'Matang Mangroves Perak'. Mangrove afforestation program and economically important shrimp species is represented on these stamps.

The Matang Mangrove Forest Reserve which covers an area of 400 km<sup>2</sup>, is recognized as the best managed sustainable mangrove ecosystem in the world. This mangrove reserve is rich and diverse in wildlife that encourages nature lovers to visit and explore it. There are 28 true mangrove species and 13 associate mangrove species, 19 mammals, at least 155 species of birds, a species of river dolphin (Chinese White Dolphin), 112 species of modern bony fishes and three species of stingrays; and approximately 50 species of crabs and 20 species of prawns and shrimps. Like other mangrove swamps, the Matang Mangrove Forest Reserve has also been proven to act as a natural barrier against Tsunami. This is undoubtedly an important site for coastal migratory water birds and part of migrant forest birds. As many as 43,000 to 85,000 birds may be seen using the forest during the migration.

Fiji in 2005 issued a set of four stamps on Little Green-backed Heron *Butorised striatus*, Great White Egret *Egretta alba*, White-faced Heron *Ardea novaehollandiae*, and Pacific Reef Heron *Egretta sacra* in mangrove habitat.

Taiwan (Republic of China) (2005) published a series of special stamps illustrating 'Mangrove Plants of Taiwan' to raise public awareness and understanding of mangroves. These are *Kandelia obovata*, *Rhizophora stylosa*, *Avicennia marina*, and *Lumnitzera racemosa*. In the background of each stamp, there is an example of the plant species in a strand while a close up view of fruits or the viviparous propagules of the plant and the flowers are shown in inset view.

In recent years, the total area of mangrove forests in Taiwan has declined drastically. After harbour's development, few species became extinct or endangered. In view of the growing understanding about the importance of conservation, and strong efforts



from government and environmentalists to promote conservation, a systematic attention has been paid to conserving Taiwan's mangroves (Wang et al. 2020).

Indonesia in 2005 on the occasion of World Environment Day issued two stamps on Save Mangrove Forest. A mangrove vegetation strand of *Rhizophora* with mangrove ecosystem dependent bird and aquatic life is depicted on these stamps. Meanwhile, the Indonesian Postal Administration issued an air waybill on the first day.

'Mangrove Forest' is the theme used to design the stamp. The purpose was to socialize and make Indonesians aware of the importance of the mangrove forest for the protection of ecosystems, mainly for the coastal areas. If the society is aware of the benefits, they will actively take part in the efforts of rehabilitation and conservation of the Mangrove Forest.

Bermuda in 2005 published six stamps. Out of these, Yellow Crown Night Heron (*Nycticorax violaceus*)













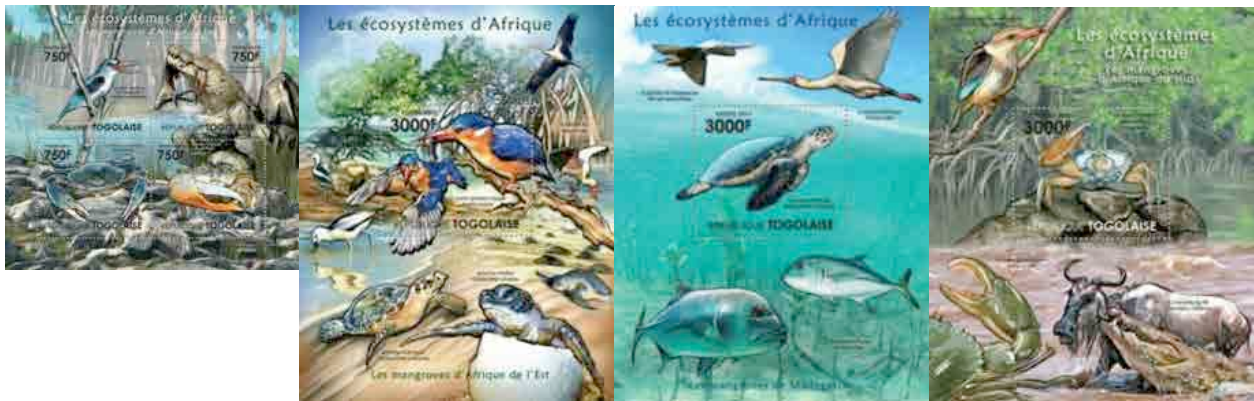


















in mangroves is showed on one of the stamps. It also represents the root diversity, plantlets and mangrove associated crabs from the forest.

Fiji in 2007 published stamp on Mangrove Lobster. Palau in the same year published a stamp showing the bird Mangrove Flycatcher *Myiagra erythrops*. Senegal in 2008 issued a stamp showing mangrove associated fauna, flamingo and monkey.

Angola in 2008 published three stamps on Mangrove along river Chilango: stilt roots of *Rhizophora*.

Japan in 2009 published a stamp on Tourism Okinawa Prefecture II showing the mangrove scrub vegetation probably an afforestation site of *Rhizophora* plantation. Sri Lanka in the same year published two stamps on Madi-Ganga shallow water body in south west Sri Lanka which is a Ramsar Wetland Site.

In 2010 decade 11 countries namely Bahamas, Papua New Guinea, Bangladesh, Republic of Togolaise,

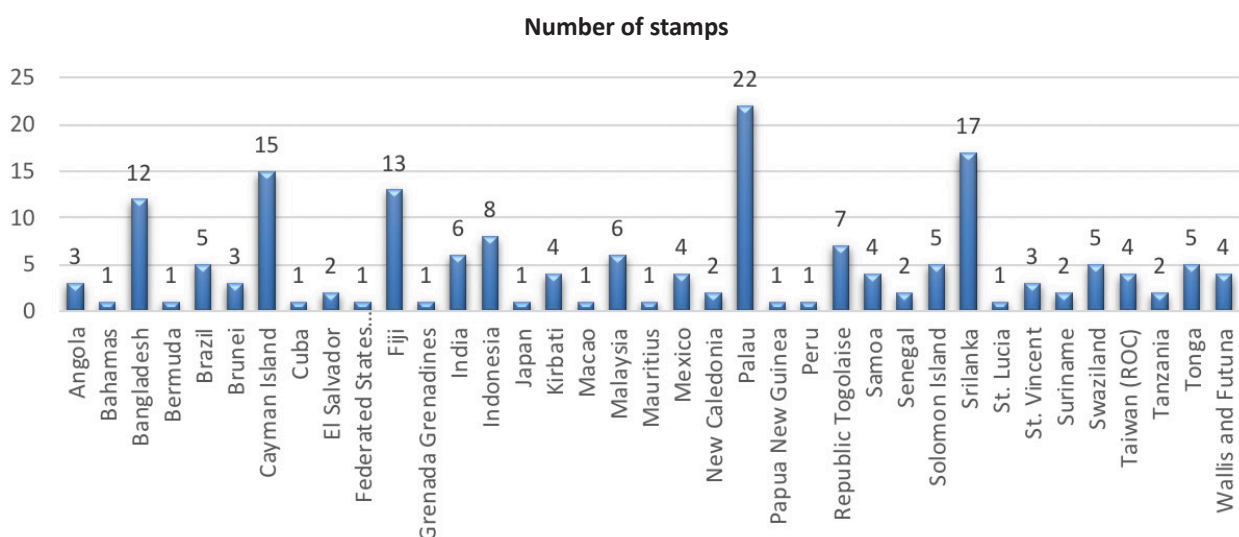
New Caledonia, Fiji, Indonesia, Kirbati, India, Wallis & Futuna Islands, and Sri Lanka issued the stamps related to mangroves.

The Bahamas issued the stamp 'Friends of the Environment' on 3 March 2010, showing the egret, a bird and a mangrove tree. Papua New Guinea in 2011 published stamp showing mangrove associated lizard *Varanus indicus*.

In 2011, Bangladesh released a sheet of 12 stamps entitled Magnificent Sundarban Birds. The 'Sundarbans' is the largest mangrove in the world located along the Ganges Delta. It is the Tiger Reserve as well as on the UNESCO World Network of the Biosphere Reserve. The 10 km<sup>2</sup> 'Sundarbans' of land and water have about 5.98 km<sup>2</sup> in India and the rest in Bangladesh. It is densely covered with mangrove forests and is also a suitable habitat to a variety of birds, reptiles and invertebrate species.

Four beautiful souvenir sheets containing seven stamps were issued by the Republic of Togolaise in 2011, as part of the ecosystems of Africa series, depicting the fauna of the mangroves forests of South Africa. It includes Kingfisher, crocodile, tortoise, and crabs as mangrove inhabitants.

The mangrove stamps were published by the Fiji government during the Manage Mangrove campaign in 2013. This was coordinated jointly by the WWF-South Pacific and the MESCAL Fiji project of the Ministry of Environment and supported by the Department of Lands and Post Fiji. The theme, 'My Mangrove My Livelihood' for these stamps showed the importance of mangrove ecosystems for Fiji and Pacific Island countries to carry message on a global scale. The MESCAL logo on the



Graphical representation showing country wise stamps related to mangroves



Table 1. Mangrove ecosystem elements on stamps and other philatelic material: a summary.

	Country	Theme / Feature of mangrove ecosystem	No. of Stamp	Date of issue
1	St. Vincent	Mangrove associated bird Green Heron ( <i>Butorides virescens</i> ) and mangrove cuckoo ( <i>Coccyzus minor</i> )	2	12.i.1970 & 24.iv.1974
2	Cayman Island	seed of the 'Red Mangrove ( <i>Rhizophora apiculata</i> )' and Mangrove species and associated crab	2	09.xii.1980
3	Cayman Island	Red Mangrove Flower blooming of <i>Rhizophora mucronata</i> .	1	09.xii.1982
4	Macao	flowering twig of <i>Acanthus ilicifolius</i> L under the theme of medicinal plants	1	14.vii.1983
5	Grenada Grenadines	200th Anniversary of the Birth of John James Audubon showing the bird 'Mangrove Cuckoo'.	1	11.ii.1985
6	Swaziland	A set of four stamps showing Ground hornbills ( <i>Bucorvus abyssinicus</i> ) and a first day cover on Mangrove cuckoo ( <i>Coccyzus minor</i> ).	5	15.v.1985
7	St. Lucia	Mangrove Cuckoo to the Savannes Bay Nature Area, Scorpion Island, Saint Lucia.	1	20.vi.1985
8	Cayman Island	Marine Fauna	12	15.ix.1986
9	Sri Lanka	Set of 4 stamps depicting mangrove habitat, species, flowering & fruiting and associated crab	4	11.xi.1986
10	Solomon Island	Mangrove associated Little Kingfisher ( <i>Ceyx pusillus</i> ) catching food in mangrove thicket	4	15.vii.1987
11	Palau	The environmental portrait set of 20 stamps depicting mangrove flora and associated fauna	20	20.xi.1989
12	Suriname	Mangrove site	2	10.x.1990
13	Mauritius	Protection of Mangroves: <i>Rhizophora mucronata</i> on East Africa and Indo-Pacific region.	1	29.xi.1990
14	Fiji	Mangrove Crabs	4	26.ix.1991
15	Peru	Stamp of riverine mangrove swamps of Tumbes National Sanctuary	1	23.xii.1991
16	Malaysia	Mangrove Swamp forest of the Hutan Paya Laut area with a drawing of a tree port of <i>Rhizophora apiculata</i>	1	23.iii.1992
17	Solomon Island	Mangrove associated crab - <i>Uca tetragonon</i>	1	15.i.1993
18	Cuba	Endangered fauna from mangrove habitats: Roseate spoonbill ( <i>Platalea ajaja</i> )	1	12.x.1993
19	Federated States Micronesia	Flower of the mangrove apple <i>Sonneratia caseolaris</i>	1	06.vi.1994
20	El Salvador	Mangrove of Pacific coast with American Pygmy Kingfisher and green Kingfisher ( <i>Chloroceryle aenea</i> and <i>C. americana</i> )	2	11.x.1995
21	Brunei	Mangrove Flowers	3	29.v.1997
22	Samoa	Mangrove diversity	4	26.ii.1998
23	St. Vincent	Mangrove tree a species of <i>Rhizophora</i> and the bird 'White Ibis' <i>Eudocimus albus</i>	1	12.iv.1999
24	New Caledonia	Aerial view of mangrove forest	1	10.viii.2000
25	Tonga	Five stamps on animals of mangrove swamps on world Environment Day.	5	05.vi.2001
26	Mexico	Definitive issue covering 24 stamps of which 2 depicts mangroves and lake-lagoon conservation	2	18.ii.2002
27	Palau	18 stamps of flowers which 1 depicts flower of <i>Sonneratia alba</i>	1	04.iii.2002
28	India	8th COP meeting: Four mangrove species	4	30.x.2002
29	Senegal	Mangrove fauna	1	20.xii.2002
30	Tanzania	Rufiji river mangrove and delta	2	22.vii.2003
31	Brazil	Stamp sheet on Preservation of the Mangrove Swamps and Tidal Zones.	5	05.vi.2004
32	Mexico	Definitive issue covering 24 stamps of which 2 depicts mangroves and lake-lagoon conservation	2	01.viii.2004
33	Malaysia	Matang mangrove forest	5	04.x.2004
34	Fiji	Heron & Egrets in mangrove habitat	4	26.i.2005
35	Taiwan (ROC)	Four mangrove species <i>Kandelia obovata</i> , <i>Rhizophora stylosa</i> , <i>Avicennia marina</i> and <i>Lumnitzera racemosa</i> .	4	10.iii.2005
36	Indonesia	Save Mangrove Forest	2	05.vi.2005
37	Bermuda	Out of 6 stamps Yellow Crown Night Heron ( <i>Nycticorax violaceus</i> ) in mangroves	1	18.viii.2005
38	Indonesia	Milky stork ( <i>Mycteria cinerea</i> )	2	05.vi.2005

	Country	Theme / Feature of mangrove ecosystem	No. of Stamp	Date of issue
39	Fiji	Mangrove Lobster	1	24.i.2007
40	Palau	A flycatcher in mangrove forest	1	01.iii.2007
41	Senegal	Mangrove associated fauna: Fmaingo & Monkey	1	27.ii.2008
42	Angola	Mangrove along river Chilango: stilt roots of <i>Rhizophora</i>	3	30.viii.2008
43	Japan	Tourism Okinawa Prefecture II	1	02.ii.2009
44	Sri Lanka	Madi-Ganga shallow water body in south west Sri Lanka which is a Ramsar Wetland Site	2	02.ii.2009
45	Bahamas	Egret bird with mangrove tree background	1	03.iii.2010
46	Papua New Guinea	Mangrove associated Lizard <i>Varanus indicus</i>	1	05.i.2011
47	Bangladesh	Magnificent avifauna of Sundarbans World Heritage	12	17.vii.2011
48	Republic Togolaise	Four sheet with the themes of mangrove associated faunal members	7	28.ix.2011
49	New Caledonia	Mangrove Forests	1	08.xi.2012
50	Fiji	My mangrove – My Livelihood	4	30.x.2013
51	Indonesia	Environmental Care	4	04.v.2014
52	Kirbati	Mangrove ecosystem and conservation	4	16.vi.2014
53	India	a special cover on Wild Life Sanctuary (Mangroves, Coringa).	1	25.vii.2014
54	India	a special cover Mangroves	1	01.xii.2015
55	Wallis and Futuna	Mangrove forest conservation	4	08.xi.2018
56	Sri Lanka	a special cover commemorative cover on mangroves	1	26.vii.2019
57	Sri Lanka	Set of 10 mangrove plant species	10	03.ii.2020
		Total	176	

Decade	1970s	1980s	1990s	2000s	2010s (till date)	Total
No. of countries that published stamps related to the mangroves	1	8	12	16	11	48
No. of stamps	2	51	22	50	51	176

stamp indicates a collective effort and makes it a product owned by everyone in the country.

Indonesia in 2014 on the occasion of World Environment Day published four stamps in two sets, one of them shows a mangrove bird *Leptoptilos javanicus* and the other set has Mangrove Crab *Scylla serrata*. New Caledonia in 2014 published stamp on mangroves forest.

Kirbati has published four stamps related to mangrove ecosystem and conservation with tagline of mangroves helping to save our community.

Similarly, in 2014, the Postmaster General of Vijaywada, Andhra Pradesh, India, published a special cover on 'Coringa Wildlife Sanctuary and estuary'. It is the second area of mangrove forests in India with 24 mangrove tree species and over 120 bird species. It is home to the Critically Endangered White-backed Vulture and Long-billed Vulture. In 2015 during Navi Mumbai Festival of Stamps, the postal department issued a special

cover showing mangrove vegetation.

In 2018 Wallis and Futuna Islands published four stamps on conservation of mangrove ecosystem.

In 2019 Sri Lanka published a special commemorative cover on mangroves on World Mangrove Day.

Recently, in 2020, on the occasion of World Wetland Day, Government of Sri Lanka published a set of 10 mangrove species, viz.: 01. *Bruguiera exangular*, 02. *Bruguiera cylindrical*, 03. *Bruguiera gymnorrhiza*, 04. *Nipa Palm*, 05. *Stemanoporus moonii*, 06. *Mesua stylosa*–*Suwanda*, 07. *Xylocarpus granatum*, 08. *Scyphiphora hydrophyllacea*, 09. *Sonneratia alba*, and 10. *Aegiceras corniculatum*.

For philatelic purposes, the term mangrove is fortunate enough to have a post office known as Mangrove Bay Post office. It is situated in Somerset Village of Bermuda with an official address as 55 Mangrove Bay Road, Sandys MA 02.



## DISCUSSION AND CONCLUSION

The ecological and economic importance of mangroves is recognized throughout the world. They are also depicted on stamps and other philatelic products around the globe. Though the world is adopting 'paperless' strategy today and surface mails have limited scope in future, philately would continue to be a passion and thus a medium of awareness.

In the stamp records, mangroves are depicted in several ways such as panoramic views of forests, waterways bordered by stilt roots and plant thickets, floral elements and associated fauna, habits of plants and animals, flowers and fruits, fishing also covering the conservation and tourism aspects of mangrove habitats. However, as observed in philatelic records, mangrove fauna (especially avifaunal diversity) is favoured and predominantly expressed by all the countries.

Mangrove habitats are reflected as major coastal wetlands and protected areas in the philatelic material. They are also specifically used as tools for national public awareness and global communication through visual/pictorial language.

It is observed that since 1970, the mangrove forest or its components have appeared regularly on the postal stamps and other documents. Out of 112 known countries hosting mangroves at their coasts along the tropical and subtropical regions, it is interesting to note that around 37 countries have published them on their national stamps.

The trend of stamps related to mangroves is presented below in a tabular form. It clearly shows a trend of increasing number of philatelic products added by various countries across the globe. This can be correlated with the level of awareness at Global scenario and at the scale of local government. This could be due to direct or indirect impacts of climate change or sea level rise or empathy for natural resources and biodiversity.

Palau, an island in the Pacific Ocean, published the maximum (22) of mangrove related postal displays while Sri Lanka ranks second with the thematic publication of 17 stamps including a special cover.

To conclude, the mangrove ecosystem which is respected for its diversity, is represented in a diverse way in philately. A thematic philatelic approach underlines the possibility of the use of philately (as a combination of art and science) to represent the mangrove environment, which can indirectly help in understanding, protecting and conserving mangrove ecosystem.

## COMPETING INTERESTS DISCLAIMER

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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