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Promoting tasar silkworm *Antherea mylitta* drury conservation via philately

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Abstract

Tasar silkworm *Antherea mylitta* Drury has 44 reported ecoraces distributed in India. Of these many are on verge of extinction due to deforestation, climate change, pollution, urbanization etc. *In-situ* conservation measures for some ecoraces like wild daba & laria in Jharkhand, Modal in Odisha, Raily in Chattisgarh etc. are being taken up by Central Tasar Research & Training Institute (CTR&TI), Ranchi, India. However, tasar silkworm needs special attention in the society through educating and popularizing this silkworm and its silk. One such medium is through mailing services like post office via postal stamps. Stamps can create huge impact and promotes the tasar sericulture among the students, common man and youth. Our objective was to promote tasar silkworm and its conservation through postal stamps. Apart from these, several stamps on insects which signifies the insect role in the ecosystem are also included in this paper. Though India is one of the megadiversity hotspots in the world, and around 70% of the fauna are insects, and is the unique country in the world with 5 different types of silks like mulberry, tasar, eri, muga and oak tasar; silkworms are not duly recognized. We took an initial step towards the promotion of tasar sericulture and its conservation by utilizing the My stamp service of India Post.

Keywords: Stamps, biodiversity, India post, muga, eri, mulberry

Introduction

Philately (Greek *phil-* "love" and *ateleia* "exempt from tax") is collection and study of postage stamps. Philately is a delightful hobby that enriches the knowledge in the fields of polity, history, national and international events, geography, biodiversity, science & technology, art and culture, national heritage etc. Postage stamp, plays dual role as a token of receipt of postage and promote national heritage and events. Thus, it plays a great role as a cultural ambassador. Philatelists dealing with insect-related stamps are said to practice "entomophilately". Many entomologists are also philatelists. Postage stamps can be used as very good teaching aid for biology ^[1] and can be applied to entomology in creating interest, awareness & conservation of insect fauna. Chemists have long recommended postage stamps as teaching aids ^[2]. Then why not entomophilately? Research journals include series such as 'Genetic landmarks through philately ^[3], document medical advances and public education campaigns featured on postage stamps or publicize stamps honoring scientists ^[4]. So, philately is regarded as 'King of hobbies'. 'My Stamp' is a personalized postage stamp, an initiative of India Post, Government of India to popularize philately. This service is available across the country.

Where to get the stamps in India?

Many authorized dealers sell or one can exchange stamps from the Philatelists. Be cautious while purchasing online as fake stamps are flooded the market. India post has provided an excellent opportunity to make our own stamps under the "My Stamp" facility.

Role of philately in entomology

1. Creation of interest among students & general public towards entomology.
2. Create awareness about the biodiversity and its conservation.
3. Collection of insect stamps become hobby.
4. Instead of collecting insects, students can collect and preserve these stamps.
5. Insect phylogenies can be better explained with stamps.

6. To commemorate the famous personalities/ scientists by issuing postal stamps by postal departments.
7. Create research enthusiasm among the fraternity.
8. Attractive way to illustrate oral presentations, papers, etc.
9. Inexpensive and effective teaching tools.

Philately in India

The first independence stamps were issued in 1947, depicted the Ashoka Pillar, (National Emblem of India) the Indian National Flag and an Aircraft separately in each stamp. After independence, stamps were issued to highlight the country's achievements in science and technology, socioeconomic developments, art, architecture, crafts, maritime heritage, science, technology, defence and cinematic. Great leaders, personalities of different spheres of life of national and international standing have also been honoured with commemorative stamps. So far very few stamps on insects are issued. After independence, the first stamp on insects was issued in 1981 (butterfly *Teinopalpus imperialis*, *Cyrestis achates*, *Cethosia biblis*, *Stichopthalma camadeva*) and again in the year 2008 four stamps on butterflies *Papilio mayo* (male and female) *Pachliopta rhodifer* (male and female). Recently in 2017, 4 lady bird beetle stamps and one butterfly stamp were issued

(<http://postagestamps.gov.in/Stampofyear.aspx?uid=2017>)

(Plate 1). In 2018, stamp was issued on *bhagalpur silk* as it got geographical indication tag. India is the second largest contributor of silk in the world & unique in having 5 different types of commercial silks like mulberry silkworm *Bombyx mori*, Tasar silkworm *Antheraea mylitta*, Eri silkworm *Samia cynthia ricini*, Muga silkworm *A. assamensis* and Oak tasar *A. pernyi*. But sericigenous insects are not recognized well on the postal stamps both in India and abroad.

Tasar silkworm has 44 identified ecoraces in India [5]. Many argue that ecoraces are on verge of extinction due to anthropogenic and natural consequences and the present status of ecoraces is uncertain. The only institute in the World exclusively dedicated to carry out research on Tasar silkworm is Central Tasar Research and Training Institute, Central Silk Board, Ministry of Textiles, Government of India, Ranchi, Jharkhand. CTR&TI along with Forest departments and state sericulture departments has taken the herculean task of tasar silkworm conservation.

Tasar silkworm is entirely an out-door activity mainly in forest and block plantations of arjun, asan or sal trees. This practice is a deeply assimilated with the tribal culture and community. Muga silkworm endemic to Assam, India and accorded geographical indication (GI) registry. Most of the North-east women knew the art of weaving the silk. Many tasar ecoraces were on verge of extinction due to climate change and anthropogenic factors. Now it's a high time for

the Country to save our tasar silkworm biodiversity in mission mode approach. In this connection, to create awareness about our silkworm among the stake holders/ NGOs/ general public of India, philately finds a useful tool.

World Scenario

Postage stamps featuring insects of various orders have been published across the globe depicting their ecological role, behavior, conservation issues, beneficial to humans, aesthetic value etc. Mainly lepidopterans and coleopterans were depicted on postal stamps (Plate 2, 3). Even entomologists are honored on stamps signifying their contribution to the society (Plate 4). Of the beneficial insect's honey bees, silk moths, and some natural enemies are very well recognized. The first insect stamp depicted a small honey bee hive and was issued by Nicaragua in 1891. Other countries followed this trend and illustrated not only beneficial honey bees but also pestiferous ones. Malaria and many other vector borne diseases to human and domestic animals were also depicted in stamps. So far, many countries across the globe like Bhutan, Afghanistan, USA, Ecuador, Mozambique, Nicaragua, Union of Comoros, Bostwana, Republique Cetafricana, Ivory Coast, China, Japan, Mongolia, Vietnam etc. issued stamps on insects and entomologists, giving the emphasis on this subject. But the case is different in India.

The Silkworm (*Bombyx mori*) has been honored philatelically more frequently than any other lepidopterans insect (though less frequently than the honeybee). List of postage stamps in *Bee World* showing bees, hives and honeycomb was published [6]. Many stamps were also issued on pest management aspects like insecticide role in insect control, mechanization of insect control, on international pests like locusts, hazards of indiscriminate use of insecticides etc.

Entomologists honored by philately

In 1953, Italy issued a single stamp honoring Agastino Bassi Der Lodi & his contributions. Union of Comoros issued stamps in 2008 honoring Nathan Banks, Henry Walter Bates, J.H. Comstock, J.H. Fabre, Christopher Aurivillius and William Kirby. Likewise, Republic Centrafricana issued stamp honoring Evelyn Cheesman, a British entomologist in 2011 (Plate 4). Other Notable personalities honored in many countries like Aristotle, Charles Darwin, Sir Ronald Ross etc.

The insect stamps used in this paper are from the first author's personal collections (2007-2017). Stamps on the tasar silkworm got printed from the My Stamp service, Ranchi GPO, India post, Government of India in 2018 to popularize this National heritage & thus its conservation. We will use them in all the postal communications so as to create the awareness in the society.



Plate 1: Insects on Indian postal stamps (1947-2018)



Plate 2: Lepidopterans on postal stamps



Plate 3: Coleoptera on postal stamps



Plate 4: Entomologists on postal stamps



Plate 5: Tasar moth printed on India stamp through 'My Stamp' facility.

Conclusion

India is one of the mega biodiversity hot spots in the world. In this speedy generation, humans are destroying and neglecting the biodiversity. Society need to be sensitized towards mother nature & its resources. Philately can serve to remind everyone, in a friendly way, that the world's flora and fauna are in crisis and we need to conserve them. This effective tool can educate and provide awareness to the society towards conservation.

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