Volume 21 Issue 32
Originally issued as C5

Global Journal of Science Frontier Research: C
Biological Science
Volume 21 Issue 5 Version 1.0 Year 2021
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals
Online ISSN: 2249-4626 & Print ISSN: 0975-5896

Owls and Bats Act as Future 'Wild X-Disease' Preventive COVID-19 Non-Medicated Vaccine: Improved Global-Health-Forestry-Agriculture -Environment-Science-Technology-Communication!

By Dr. Subhas Chandra Datta

Visva Bharati University

Abstract- The emergence of infectious pathogens with epidemic and pandemic potential like "Severe acute respiratory syndrome (SARS), middle east respiratory syndrome (MERS), influenza, Ebola, Marburg, Lassa, Nipah, and Zika for the last 30 years, and the current COVID-19 disease caused by coronavirus-2 (SARS-CoV-2), is highly infective, causing severe acute, long-term illness that affects the global public health and economic threats". Still, now no 'Buster-Dose-Vaccine' is discovered. On the other hand, food production forests, agriculture, and horticulture significantly reduce different pest attacks. So, to tackle and overcome both, the naturally growing "Wildlife-Conservation-Project of 'Wild Barn Owl and Bats' in the two Heritage-Schools" forming a 'Complex-Typical-Ecosystem' in the food-chain-relationships-landscaping, controlling the different pests in the forest, horticulture, agriculture, and pisciculture, etc.

Keywords: owls-and-bats; future-wild x-disease; preventive-covid-19-non-medicated-vaccine; improved-global-health-forestry-agriculture-environment-science-technology-communication.

GJSFR-C Classification: FOR Code: 060899



Strictly as per the compliance and regulations of:

© 2021. Dr. Subhas Chandra Datta. This research/review article is distributed under the terms of the Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0). You must give appropriate credit to authors and reference this article if parts of the article are reproduced in any manner. Applicable licensing terms are at https://creativecommons.org/ licenses/by-nc-nd/4.0/.

Owls and Bats Act as Future 'Wild X-Disease' Preventive COVID-19 Non-Medicated Vaccine: Improved Global-Health-Forestry-Agriculture-Environment-Science-Technology-Communication!

Dr. Subhas Chandra Datta

Abstract- The emergence of infectious pathogens with epidemic and pandemic potential like "Severe acute respiratory syndrome (SARS), middle east respiratory syndrome (MERS), influenza, Ebola, Marburg, Lassa, Nipah, and Zika for the last 30 years, and the current COVID-19 disease caused by coronavirus-2 (SARS-CoV-2), is highly infective, causing severe acute, long-term illness that affects the global public health and economic threats". Still, now no 'Buster-Dose-Vaccine' is discovered. On the other hand, food production forests, agriculture, and horticulture significantly reduce different pest attacks. So, to tackle and overcome both, the naturally growing "Wildlife-Conservation-Project of 'Wild Barn Owl and Bats' in the two Heritage-Schools" forming a 'Complex-Typical-Ecosystem' in the food-chain-relationships-landscaping, controlling the different pests in the forest, horticulture, agriculture, and pisciculture, etc., increasing food production, but also plays a vital role in preventing COVID-19, the high rate of morbidity and mortality, showing the "Wild Barn Owls and Bats Act as a Future Preventive Epidemic COVID-19 Model", and developing policy initiative potentially life-saving therapies by boosting natural immunities of the different communities of Burdwan Municipality, West Bengal, India, and wildlife conservation may be the "Wild Owls and Bats Act as Future Wild X-Disease Preventive COVID-19 Non-Medicated Vaccine: Improved Global-Health Forestry-Agriculture-Environment Science-Technology-Communication", and worlds become retained in old form developing education and research in the new normal situation. It needs the "Wildlife Conservation Approach" with human, animal, and environmental interactions that may prevent any kinds of "X-Disease" in the future.

Keywords: owls-and-bats; future-wild x-disease; preventive-covid-19-non-medicated-vaccine; improved-global-health-forestry-agriculture-environment-science-technology-communication.

Author: PhD, Department of Zoology, Visva Bharati University, West Bengal, India, Headmaster, Secretary and Researcher, Kanchannagar D N Das High School (HS), West Bengal, India, National Awardee, C/O- Rajendranath Nag, Bajeprotappur (Katwa Road), Opposite to Entry of SBI, Burdwan Municipality, Bardhaman-713101, Purba Bardhaman, West Bengal, India. e-mails: dattasubhas@rediffmail.com, subhaschandra.datta@gmail.com

I. Introduction

The last 30 years have faced various infectious diseases like severe acute respiratory syndrome (SARS), middle east respiratory syndrome (MERS), influenza, Ebola, Marburg, Lassa, Nipah, Zika, and now SARS coronavirus 2 (SARS-CoV-2), causing epidemic and pandemic, and impact on global public health and economy. The emergence of the future "X-Disease" depends on multiple forces like climate change, ecosystem changes, and increasing urbanization, and we have to be ready for future "X-Disease" [1]. Still now, in the New York Times, the first week of October 2021, Wolfe J. (Figure 1) reported that the U.S. is about to reach more than 700,000 deaths from Covid-19. The last more than 100,000 people to die passed away months after vaccines were American adults, and the majority of unvaccinated Americans in recent months, they also analyzed that the people who died in the last three and a half months for the spreading widely 'Delta mutant variant' in the South lagging in vaccinations. And, recently during the eve of 'Durga Puja' in Purba Bardhaman, West Bengal, India (Figure 1), on 12th-October 2021 showed that the total COVID-19 positive cases are 40157, the total number of discharge cases were 39340, the total number of COVID-19 death is 479, rate of recovery was 97.97% respectively, and rate of mortality was 1.19%. The distribution of COVID positive patient in Burdwan Municipality was 10. And the recent trend is slightly increasing COVID 19. So, it is an urgent need to find out policy-initiative, cheap, and non-pollutant strategies to develop future support and treatments of COVID-19.

II. Materials and Methods

According to the Imperial Gazette of 1810, there were two English Medium Schools with Dispensary in Burdwan; Burdwan Raj Collegiate School (HS) and Kanchannagar D N Das High School (HS), Burdwan Municipality, Purba Bardhaman-713102, West Bengal, India, (Plate 1), the oldest area, where the temperature

© 2021 Global Journals

was 22±5°C, relative humidity was 75±5%, is situated near the Damodar and Banka river, and is surrounded by forest, ponds, different old trees, park, garden, playground, storehouse, rice mill, markets, agriculture-horticulture land, brave-yard, wildlife sanctuary, masjids, temples, etc. forming the 'Location Wise an Ideal Place' for keeping and caring of 'Wildlife Conservation,' with the average rainfall was 150 millimeters. The school campus prevails the different old and tall trees, nutritional kitchen garden with a midday meal, exhibited an enriched faunal diversity comprising small mammals, mongoose, owls, bats, pigeons, different small birds, reptiles, toads, and insects, etc. and the two heritage oldest schools are the symbol of the 'Wildlife Conservation,' especially the wild owls, bats, and mongoose [1-7].

III. Results and Discussions

The environment of the two schools depends on both plants and animals in the school compound in which keeping and caring of barn owls act as a keynote species in the food chain relationships. Rats that happen to spoil food items of mid-day meals, rooms, and documents are controlling by barn owl keeping in the school. Bats which inhabit the big building and different trees, making the school buildings dirty by their excreta, are also preventing by this owl species. Many pests found to significantly reduce food production in the kitchen garden in the school are also appreciably kept in control. Barn owl and bat breeding projects in the two school premises also help to escalate the vegetation profile of the school and the surrounding area and even keeps the pond ecosystem viable. It is worth mentioning that the barn owl in this school environment plays the role of a top carnivore, predating on mongoose juveniles and bats, which are mainly dependent on fishes and aquatic animals in the ponds. And, as such, an improved midday meal is possible conserving biodiversity. It observes, "Barn owl keeping helps improve the school environment, arouse the interest of students and communities on ecology and food chain relationships as well as biodiversity conservation issues." And, this ultimately contributes to sustainable pond and kitchen garden management, micro-and macro- climate issues, and also students' health and awareness development, including joyful learning experiences with "Wild Barn Owls and Bats Use as Social Vaccine Bio-Indicator Against COVID-19 Improving Science and Technology Communication Environments Socioeconomic Applications with Joyful Learning School Environment" [1-7].

Primarily it has also been observed, "The wild 'Owls' becomes the 'Social Guards, Bio-Indicator, and Social Vaccine' against COVID-19 by consuming especially Coronavirus-carrier wild bats and mongoose, enriching community health, health-risk-services, healthy-lifestyle, wildlife-conservation, agriculture, forestry, horticulture, science, technology, and communication-application-issues, socioeconomic, joyful learning environment, communities-and-health-ecology, food chain relationships issues, and contribute to sustainable pisciculture, and kitchen garden management, micro-and macro-climate issues, where it is mentioning that the wild bats secrets of immunity confirm the clues of treatment against various mutant-Coronavirus with developing the policy also, and arouse the interest of students about conservation of biodiversity" [1-6]. And recently in 'Science,' a cave in a mountain in Laos not far from the one shown here is home to bats infected with the closest coronavirus to SARS-CoV-2 yet, and the new viruses, the SARS-CoV-3, show for the first time that features of the pandemic virus exists in the wild, that viruses genetic sequence to SARS-CoV-2 up to 96.8% identical, using its surface protein, spike, angiotensin-converting enzyme 2(ACE2) for initiating an infection, and may cause 'Future Pandemic' due to evolution, several decades separate these bat viruses remain inactive [8].

Here, the bats not only control the different pests in forestry, horticulture, agriculture, and pisciculture, etc., increasing food production, but also plays a vital role in preventing the high rate of morbidity and mortality, showing the "Wild-Bat Act as a Natural-Booster-Community-Vaccine against COVID-19", and developing effective life-saving immunomodulatory therapies by improving natural-immunities, and provides-"Preventive-Community-Health-Clinical-Research-Education-and-Enriched-Wildlife-Biodiversity-Conservation-Agriculture-Forestry-Environments-Socio-economy-and-Science-Technology-Communication-Application-Issues with Joyful-Learning-Environment-with-Human-Health-Ecology, and Food-Chain-Relationships, and Community-Health" [1-9].

IV. Future Research

Wild 'Owls and Bats' are also opening a path of more future research and communication, and we strive towards the betterment of societal conditions benefitting global humanity by advancing innovations in the fields of scientific research. The wild owls and bats may be "Potential Policy Developer Family-Based-Social-Natural-Booster-Community-Vaccine COVID 19 Epidemic-Models Against Future SARS-CoV-3 (Coronavirus-3) Crisis Achieved Sustainable Development Socio-Economic Welfare Science Technology Innovations Application Issues", focusing on methods of drug and clinical research, and technology development innovation for larger green-socio-economic-welfare supported the theme "Vision 2040" that might help policymakers, solving any future virus-induced crisis of epidemic or pandemic enriching natural resources with cost-effective treatment methods.

© 2021 Global Journals

The world will remain in the old form, and the "Wild Owls and Bats Act as Future Wild X-Disease Preventive COVID-19 Non-Medicated Vaccine: Improved Global-Health Forestry-Agriculture-Environment Science-Technology-Communication", and worlds become retained in old form developing education and research in the new normal situation. It needs the "Wildlife Conservation Approach" [1-9].

V. Conclusions

Here, the wild barn owls and bats not only control the different pests in forestry, horticulture, agriculture, and pisciculture, etc., increasing food production, but also plays a vital role in preventing the high rate of morbidity and mortality, showing the "Wild-Owls and Bats Act as a Natural-Booster-Community-Vaccine against COVID-19", and developing effective life-saving immune modulatory therapies by improving natural-immunities, and provides "Preventive-Community-Health-Clinical-Research-Education-and-Enriched-Wildlife-Biodiversity-Conservation-Agriculture-Forestry-Environments-Socioeconomy-and-Science-Technology-Communication-Application-Issues with Joyful-Learning-Environment-with-Human-Health-Ecology, and Food-Chain-Relationships, and Community-Health". So, wildlife conservation may be the "Future Preventive Epidemic COVID-19 Model" enriching "Forestry Horticulture Agriculture Environment Health Biodiversity Science Technology Communication Application Issues", and worlds become retained in old form developing education and research. It needs the "Wildlife Conservation Approach" and human, animal, and environmental interactions to prevent any kinds of "X-Disease."

Acknowledgments

The work described here has been fully supported by the Hon'ble Nature-lover Headmaster, Mr. Subrata Mishra, double M.A. in Literatures (English & Bengali), who help to write the manuscripts by providing day to day information and photographs. I like to thanks Mr. Rakesh Khan, M.A., B.Ed., Secretary, and Mr. Subhendu Bose, Assist Lecturer, President, and all members of Burdwan Green Haunter and Students' Goal, for helping me for collection of data and arranging several awareness programs regarding Science and Technology Communication Wildlife Conservation Biodiversity issue. I am also thankful to the Hon'ble Divisional Forest Officers and his teams, Burdwan Division, Bardhaman-713104, West Bengal, India, who helped the proper count of wild bats. I'm also thankful to the eminent educationist Sri Tapaprakash Bhattacharya for inspiration and guidance.

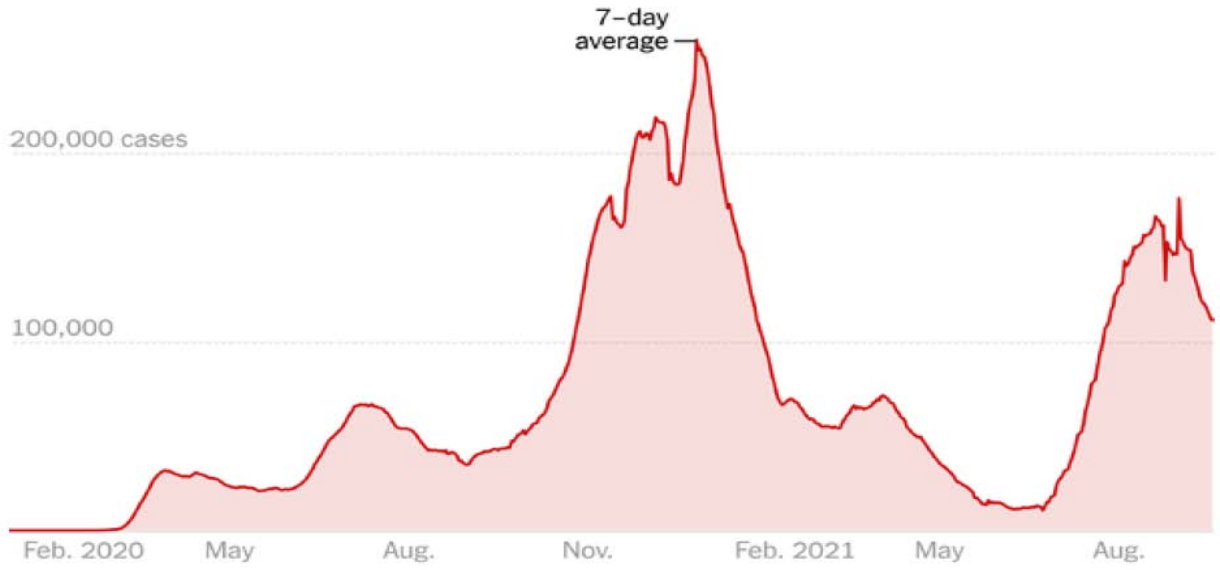
Conflicts of Interest Statement

The author declared that he has no conflict of interest regarding the research work.

References

1. Kerkhove MDV, Ryan MJ, Ghebreyesus TA. Preparing for "Disease X". Science. doi:10.1126/science.abm7796.
2. Datta SC. Dinna Nath Das-Middle English School and -Dispensary Act As a Model: The 21st-Century-Coronavirus-2 Resistance-Futuristic-Common-Ecofriendly-Complex-Green-Digital- School-Health-Ecosystem by Bio-Medicine-Vaccine-Nationalism-Equity-Passport. SunText Rev Arts Social Sci. 2021; 2: 117.
3. Datta SC. Sustainable Reopening of School Preventing Reinfection-Coronavirus 2 in New-Normal by Vaccine-Nationalism- Equity-Passport with Ginger-Drinks-Bio-Medicinal-Mid-Day-Meals! Int J Res –Granthaalayah. 2021; 9: 165-170.
4. Datta SC. Improved Science and Technology Communications: Barn Owl Act As Social Vaccine Against COVID-19. International Journal of Latest Research in Science and Technology. 2020; 9(3):6-13. https://www.mnkjournals.com/journal/ijlrst/Article.php?paper_id=10994.
5. Datta SC. Biological and BioSystems Engineering Barn Owl Controlled COVID-19: Engineering Bio-mechanical Biomedical Science Technology Communication Enriched Agriculture Environment. International Journal of Engineering and Science Invention. 2021; Manuscript Id: IB910037, ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726 (Accepted).
6. Datta SC. Artificial-Nest Rainwater-Harvesting with Fishery and Floating-or-Rooftop-Gardening Act as 21st Century Civil-Engineering COVID-19 Epidemic-Model: Improved Biodiversity Agriculture Socio-Economic Environmental-Sciences Technology-Communication. Journal of Civil Engineering and Environmental Sciences. 2020; 6(2): 022-036. https://dx.doi.org/10.17352/2455-488X.000037.
7. Datta SC. Barn Owl Maintain Physical Distance Preventing COVID-19: Improved Plant Biology Agriculture Biodiversity Conservation Science Technology Communication Application Joyful Learning Research Issues! Int. J. Pl. Biol. Res. (Peer Reviewing).
8. Cohen J. Close cousins of SARS-CoV-2 found in a cave in Laos yield new clues about pandemic's origins. Sci. 2021; 30 September. doi: 10.1126/science.acx9257.
9. Christie MJ, Irving AT, Forster SC, Marsland BJ, Hansbro PM, Hertzog PJ, etal. Of bats and men: mmunomodulatory treatment options for COVID-19 guided by the immunopathology of SARS-CoV-2 infection. Sci. Immunol. 2021; 6(63); eabd0205):1-20. doi: 10.1126/sciimmunol.abd0205. https://www.science.org/doi/10.1126/sciimmunol.abd0205.

© 2021 Global Journals



Daily Press Briefing
Purba Bardhaman
Date: 12/10/2021 (Up to 5.00 P.M.)
(Report to be send by 7.00 P.M Daily)

Part – I: Related to COVID-19

i)	**Total No. of COVID Positive Patients found on the day of reporting ***	:	28
ii)	Total no of COVID positive patients**	:	40157
iii)	Total no of active patients as on today***	:	338
iv)	Total no of discharged cases	:	39340
v)	Total no of COVID death recorded	:	479
vi)	Rate of Recovery# (Percentage)		97.97
vii)	Rate of Mortality# (Percentage)		1.19
viii)	Current Positivity Rate (last 7 days)# (Percentage)		1.95
•	**Testing status : RTPCR + RAT**		
xi)	Total no of Sample collected	:	761182
xii)	Total no of Sample tested	:	760821
xiii)	Total no of Positive cases	:	34234 (+53 repeat +ve)
xiv)	Total no of negative Cases	:	726534
•	**Containment Zone status :**		
xv)	Total no of Containment Zone as on today	:	
xvi)	Total no of containment withdrawn	:	
•	**Analysis of Positive Persons Details : On date – Positive-**		
xvii)	Total No. of Migrant (Other State + Other Dist. of WB):	:	00
xviii)	No. of Persons in Safe House:	:	00
xix)	No. of Person in Covid Hospital:	:	02
xx)	No. of Persons in Home Isolations:	:	26
Report on Sample Collection and Testing(On Date):			
xxiii)	Antigen Test	:	568
xxiv)	RT-PCR Test	:	315
xiv)	Test Result within 24 Hrs.	:	658 (RAT-568+ RTPCR-90)

Part- II:

Distribution of COVID Positive Cases found on 12/10/2021

Aushgram-I	0	Galsi-II	0	Ketugram-I	0	Mongolkote	0	Burdwan Municipality	10
Aushgram-II	0	Jamalpur	1	Ketugram-II	0	Purbasthali-I	1	Dainhat Municipality	1
Bhatar	1	Kalna-I	1	Khandoghosh	0	Purbasthali-II	0	Guskara Municipality	0
Burdwan-I	2	Kalna-II	0	Manteswar	0	Raina-I	0	Kalna Municipality	1
Burdwan-II	2	Katwa-I	0	Memari-I	2	Raina-II	0	Katwa Municipality	1
Galsi-I	0	Katwa-II	1	Memari-II	1	Other District	3	Memari Municipality	0

Analysis on COVID +Ve Cases on 12/10/2021		*COVID Positive as on today	**Total Positive Cases
Type	Symptomatic	02	4229
	Asymptomatic	26	35928
Total		28	40157
Contact Analysis	Primary Contact	01	1592
	Travel from High Burden Dist. of W.B.	00	217
	Travel from Other State	00	435
	No Travel History	27	37913
Total		28	40157

Figure 1: COVID-19 report of the United States, seven-day average in the 1st week of October 2021 in The New York Times, and of Purba Bardhaman District from 12th-October 2021

© 2021 Global Journals

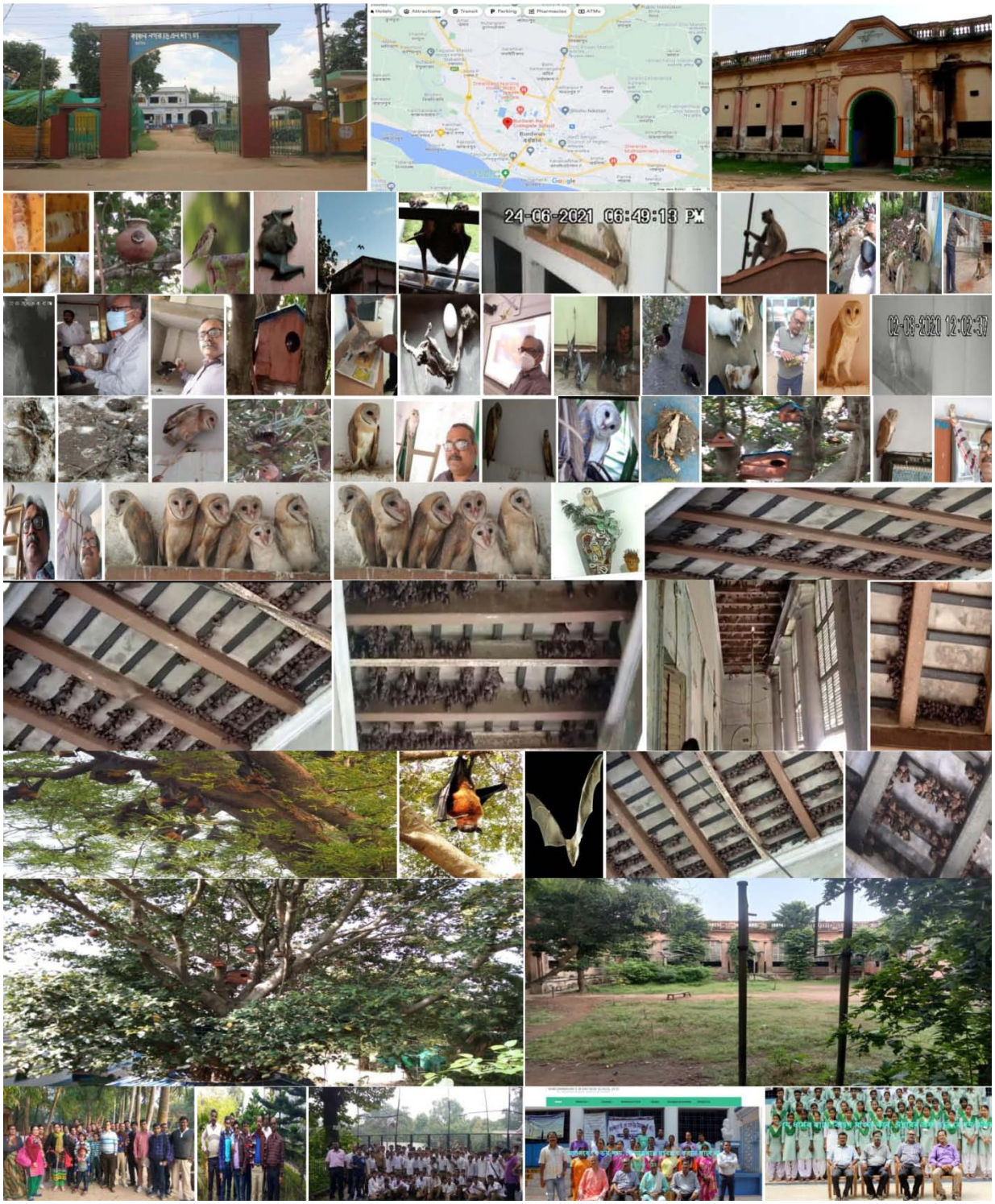


Plate 1: Activities of wild barn owls and bats in the two heritage schools Kanchannagar D. N. Das High School (HS) and Burdwan Raj Collegiate School (HS) during COVID-19 periods

© 2021 Global Journals