

2021 ANNUAL REPORT





+65 6741-2036 contact@nss.org.sg http://www.nss.org.sg



Τ

PREFACE

 Π

NSS LEADERSHIP 2021

 \prod

ATTENDANCE FOR BOARD MEETINGS

01

EXECUTIVE COMMITTEE

05

PRESIDENT'S REPORT

17

TREASURER'S REPORT

REPORT OF COMMITTEES

22

CONSERVATION COMMITTEE

31

EDUCATION COMMITTEE

REPORTS OF SPECIAL INTEREST GROUPS

34

BIRD GROUP

38

BUTTERFLY & INSECT GROUP

40

JALAN HIJAU GROUP

41

MARINE CONSERVATION GROUP

444

NATURE RAMBLERS' GROUP

45

PLANT GROUP

47

VERTEBRATE STUDY GROUP

PREFACE

Nature Society (Singapore) [NSS] has four main objectives in accordance with its constitution:

- To promote an interest in the flora and fauna of Singapore and the surrounding Southeast Asian region.
- To promote an awareness of nature and the environment and the conservation thereof.
- To encourage and promote responsible attitudes towards the conservation of our natural heritage and the environment.
- To initiate and support research projects relating to the study and conservation of nature and the environment.

NSS has been a registered Society in Singapore under the Societies Act (Chapter 311) since 30 March 1961, and an approved charity under the Charities Act, Cap 37 since 19 February 2008; it has also been accorded Institutions of a Public Character (IPC) status since 1 September 2008.

The Society reports its compliance with the Commissioner of Charities' Code of Governance by completing the Governance Evaluation Checklist for IPCs annually. The returns can be viewed on the Charity Portal (www.charities.gov.sg).

NSS's Unique Entity No is S61SS0142H.

The registered address of the Society is: 510 Geylang Road, #02-05 The Sunflower, Singapore 389466. The premises are held in trust for the Society by three trustees – Dr Geh Min, Prof Lye Lin Heng, Prof Ng Soon Chye – under a trust instrument dated 29 March 2000.

The Society's conflict of interest policy is stated in the following resolution passed at the

54th Annual General Meeting of the Society on 24 May 2008: "That at the first Executive Committee/Council Meeting after each Annual General Meeting all members of the incoming Executive Committee and of the Council declare and have minuted any general conflict of interest which they consider they may have, and that before any specific discussions and decisions at this or any other meetings of the Executive Committee and Council, members consider whether any conflicts of interest exist for any members and, where they are considered to exist, request that member to abstain from the vote or decision-making process".

The current President has served the Board for more than 10 consecutive years. NSS is in the process of reviewing and renewing members on the Board. NSS has made significant progress in 2022/2023 by nominating 3 new members to 3 key roles on the Board – as VP and Hon Secretary and Treasurer – and is in the process of making more changes. However, stability of the organisation and leadership handover is key. Hence the President remains until there are other suitable and qualified members groomed to take over the President role. Board members do not receive remuneration from the Society.

The Society has a staff strength of 5 and none of the staff receives more than \$100,000 each in annual remuneration. None of the staff also serves as a governing board member. There is no paid staff, being a close member of the family belonging to the Executive Head or a governing board member of the charity, who has received remuneration exceeding \$50,000 during the financial year.

NSS LEADERSHIP BOARD

DAY - TO - DAY LEADERSHIP

EXECUTIVE COMMITTEE (ELECTED ANNUALLY AT THE AGM*)

DR. SHAWN LUM

VICE PRESIDENT

DR. HO HUA CHEW (1 JAN 2021 TO 22 MAY 2021

MR. LEONG KWOK PENG (WITH EFFECT FROM 22 MAY 2021)

HONORARY SECRETARY

MR. MORTEN STRANG

HONORARY TREASURER

MR. BHAGYESH CHAUBEY (FROM 1 JAN 2021 TO 22 MAY 2021) MR. VEERENDRA PATWA (FROM 22 MAY 2021 TO 9 NOV 2021)

ACTING HONORARY TREASURER

MR. ANDREW LIN (WITH EFFECT FROM 9 NOV 2021)

HONORARY ASSISTANT SECRETARY

MS EVELYN NG

HONORARY ASSISTANT TREASURER

MR. VEERENDRA PATWA (FROM 1 JAN 2021 TO 22 MAY 2021)

ANDREW LIN (FROM 22 MAY 2021 TO 9 NOV 2021)

COMMITTEE MEMBERS:

MR. ALBERT LIU

MR. GOH TER YANG

MR. LESTER TAN

COUNCIL

COMMITTEE & SPECIAL INTEREST GROUPS CHAIRPERSONS:

CONSERVATION COMMITTEE MR LEONG KVX/OK PENIC

EDUCATION COMMITTEE

MR. GOH TER YANG

RIRD GROUP

MR TAN GIM CHEONG

BUTTERFLY & INSECT GROUP

DR. NGO KANG MIN

JALAN HIJAU GROUP

MR. TAN HANG CHONG

MARINE CONSERVATION GROUP

MR. KUA KAY YAW

PLANT GROUP

NATURE RAMBLERS GROUP

MR. PARTHASARATHY PANDIAN

VERTEBRATE STUDY GROUP

MR. TONY O' DEMPSEY (FROM 1 JAN 2021 TO 22 MAY 2021)

MR. YEO SUAY HWEE (WITH EFFECT FROM 22 MAY 2021)

CO-OPTED COUNCIL MEMBERS:

PROF. P N AVADHANI

MR GOH SI GUIM

DR. LIEW KAI KHIUN

MR BEN SZETO

BIRDLIFE INTERNATIONAL COORDINATOR

DR. SHAWN LUM

IUCN COORDINATOR

MS. NG BEE CHOO

RAIL CORRIDOR WATCH COORDINATOR

DR. LIEW KAI KHIUN

CHAIR, ENVIRONMENTAL LAW & POLICY WORKING GROUP

ACTING; DR. SHAWN LUM

CHAIR, FUND - RAISING AND INTERNAL AUDIT COMMITTEES

CHAIR, MEMBERSHIP & FUNDRAISING COMMITTEE

MR. ALBERT LIU

ADVISERS & MENTORS

PROF. TOMMY KOH

IMMEDIATE PAST PRESIDENT

DR. GEH MIN

FINANCE ADVISORY GROUP

MR. YIP YEW CHONG (FROM 1 JAN 2021 TO 22 MAY 2021) MR. PETER CONNELL

MR DOUGLAS FLLIOTT

MR. BHAGYESH CHAUBEY (WITH EFFECT FROM 22 MAY 2021)

ADVISORY COUNCIL

MR. WARREN KHOO

PROF. KOH KHENG LIAN

MR. LIM JIM KOON MR. LIU THAI KER

PROF. NG SOON CHYE

MR. SIM WONG HOO

ATTENDANCE FOR BOARD MEETING

FINANCIAL YEAR 2021

S/N	BOARD MEMBER	DESIGNATION	NO. OF MEETINGS ATTENDED IN 2020
01	SHAWN K. Y. LUM	PRESIDENT	15/15
02	HO HUA CHEW (TO MAY 2021)	VICE-PRESIDENT	5/7
03	LEONG KWOK PENG (FROM JUN)	VICE-PRESIDENT	8/8
04	MORTEN STRANGE	HON SECRETARY	14/15
05	EVELYN NG	ASST HON SECRETARY	13/15
06	BHAGYESH CHAUBEY (TO MAY)	HON TREASURER	3/7
07	VEERENDRA PATWA (FROM JUN TO NOV)	HON TREASURER	1/7
08	VEERENDRA PATWA (TO MAY)	ASST HON TREASURER	2/7
09	ANDREW LIN (FROM JUN)	ASST HON TREASURER	7/8
10	ALBERT LIU	EXCO MEMBER	15/15
11	GOH TER YANG	EXCO MEMBER	15/15
12	LESTER TAN	EXCO MEMBER	14/15

There was a total of 15 board meetings in the financial year ending 31 December 2021.



PRESIDENT

Dr. Shawn Lum has been an active member of the Nature Society (Singapore) for over 25 years. He is a botanist by training and has studied forests of Singapore and the region. His research focus is on the ecology and regeneration of tropical forests, particularly the effects of forest fragmentation and the associated loss of

large animals on forest viability. Shawn is a Senior Lecturer at the NTU Asian School of the Environment. At the Nature Society, Shawn served on its Council (as Chair of the Plant Group) for four years. He then served on its Executive Committee, first as Vice President, and later as President. He has seen nature and nature conservation become increasingly mainstreamed into Singapore planning and policy making, and works to create nature-positive outcomes from discussions between policy makers, government agencies, academics, and nature advocates. He was a recipient of the President's Award for the Environment in 2017, and was awarded the Public Service Medal (Pingat Bakti Masyarakat) in 2020.

VICE-PRESIDENT

Mr. Leong Kwok Peng is a Chemical Engineer by training and has been in the Petochemical Industry. He is currently one of the directors of Edu Oudoor Activities that operates and organises outdoor camps for schools. He has been a member of NSS since the mid-1980s and used to chair the Marine Conservation Group of NSS and



subsequently the VP for about 10 years. Notable programs he has coordinated include the Reef Rescue Project in the mid 1990s, publication of the book 'Singapore Waters - Unveiling Our Sea' in 2003 and the campaign for the Green Corridor now Rail Corridor since 2011



SECRETARY

Mr. Morten Strange is a retired petroleum engineer; he moved to Singapore first time in 1980 and has lived here continuously since 1999, he is now a Permanent Resident. Morten is also a former bird photographer, but became a qualified financial analyst in 2013; he has authored many books and articles about birds, nature and financial

independence. He joined the Nature Society (Singapore) in 1984, was Editor-in-chief of Nature Watch 2010-2013 and became Honorary Secretary in 2019, he is currently Assistant Honorary Secretary. Now retired, Morten enjoys discussing environmental issues with friends and long walks in the wilderness, occasionally with his wife, naturalist Ng Bee Choo.

ACTING TREASURER

Mr. Andrew Lin was Assistant Treasurer from 22 May before assuming the role of Acting Treasurer w.e.f 9 November,

He is a certified accountant and holds a Masters in Business Administration from Deakin University. He spent twenty years in various regulatory and compliance roles of the Ministry of Finance. Besides his professional work, Andrew



volunteers in various charities and causes like the Singapore Heritage Society and My Community. Since 2010, Andrew has been a volunteer guide in the Bukit Brown Cemetery and various nature heritage sites. He enjoys being in the outdoors and wishes Singapore to be truly a City in Nature!

后45000 (ALIMANIA) (AL



ASSISTANT SECRETARY

Mrs. Evelyn Ng is a passionate supporter of our natural heritage and has been a long-time volunteer with the Nature Society Singapore (NSS), serving on the NSS Council in several capacities over the years – as Honorary Secretary in the 2000s and most recently, as Assistant Honorary Secretary from 2019 to 2022. Evelyn currently teaches in the School

of Interdisciplinary Studies, Ngee Ann Polytechnic. In the course of a 30-year career spanning diverse industries in both the public and private sector, she has worked on capacity-building and on promoting a collaborative work culture, bringing together teams in operationalizing systems and promoting sustainability, as well as in introducing innovative learning experiences. She was awarded The Public Administration Medal (Bronze) in 2019 for her work in education.

COMMITTEE MEMBER

Mr. Albert Liu is a nature advocate and has been volunteering with Nature Society (Singapore) since 2013. He likes being on the mudflats for the Horseshoe Crab Rescue and Research programme, and is also involved in membership work. As a military officer, he believes his day job contributes to the security and stability of Singapore, which allows



people to enjoy nature and conservation. Albert also volunteers for Accessible Ubin, a ground-up initiative which advocates for a more inclusive, accessible and safer Pulau Ubin for everyone.



COMMITTEE MEMBER

Mr. Goh Ter Yang is currently a Senior Manager for Biodiversity at Winning Consortium Simandou, where he is in charge of coordinating the Consortium's biodiversity conservation efforts in accordance with the International Finance Corporation's (IFC's) Performance Standard 6. He previously worked full time as the Outreach Officer

for Nature Society (Singapore) and has since served in the Society's voluntary positions such as the Chairperson of the Education Committee and member of the Executive Committee. Ter Yang is a member of the IUCN Horseshoe Crab Specialist Group.

COMMITTEE MEMBER

Mr. Lester Tan has been a volunteer with Nature Society (Singapore) for about 11 years. He is currently the Vice-Chairman of Marine Conservation Group and leads the Horseshoe Crab Rescue & Research Program. With his dedication and passion about the marine environment, he is constantly learning and advocating about these animals and their habitats



actively through citizen science. He started out as a volunteer, before becoming a member of the society. And most recently he is nominated as a member in the Executive Committee. Lester is also a commissioned member of the International Union for Conservation of Nature (IUCN) Horseshoe Crab Species Specialist Group (SSG) and the Asian Horseshoe Crab Working Group (WG) in the region.

President's Report

by Dr. Shawn Lum

A year ago, I wrote that 2020 would be remembered as the Year of COVID 19. I now look back at 2021 as an extension of 2020, where one COVID dominated year blurred into the next. I have difficulty placing events of the past two years with confidence in the correct sequence. Would the Nature Society (Singapore) have a quiet second year of the pandemic, as restrictions on gatherings and group sizes continued to limit our outings, in-person events and public outreach activities? To what extent could the Society contribute to nature conservation and outreach at this critical point in the race to reverse the biodiversity crisis?

Achievements - Conservation and Advocacy

There were no formal awards for the Nature Society (Singapore) in 2021, but there were achievements that

Nature Society members made significant contributions to. One example was the announcement in July 2021 that plans for the Ulu Pandan HDB project at the Dover Forest had been modified, with much of the western half of the 33-hectare site set aside as a Nature Park for as long as possible. The updated plans announced by HDB also included a stream and greenery to be protected in the eastern half of the site, where housing will be concentrated. Earlier plans for the area had included the construction of housing in the eastern half of Dover Forest, with 5 ha of forest retained. The NSS Conservation Committee led by Leong Kwok Peng and Dr Ho Hua Chew, submitted an alternative proposal in early 2021 which would have left the Dover Forest site largely intact for nature and naturerelated recreation, with housing to be built instead at nearby brownfield sites. The possibilities for the Dover

Forest and its biodiversity value generated considerable interest from a broad crosssection of Singaporeans, and a wide-reaching advocacy campaign by the Singapore Youth Voices for Biodiversity. Dr Ho Hua Chew and the NSS Conservation Committee have stressed the conservation importance of the Dover Forest and other secondary forests in the area such as Clementi Woods and the Alexandra Woodland for decades. The announcement by HDB that more forest

other conservation groups, prominent among them our UK Partner the Royal Society for the Protection of Birds, or RSPB, worked with the South Korean government to have the tidal flats along the South Korean section of the Yellow Sea, formally known as "Getbol, Korean Tidal Flats" inscribed as a UNESCO World Heritage area. Inscription was not a foregone conclusion; despite the critical conservation value of the South Korean tidal flats along the Yellow Sea, other factors

"The announcement by HDB that more forest would be retained (at least for the medium term) is a win for Singapore that traces its origins to work by Dr Ho and colleagues over 20 years ago."

would be retained (at least for the medium term) is a win for Singapore that traces its origins to work by Dr Ho and colleagues over 20 years ago.

Nature Society (Singapore) is part of the BirdLife International Partnership. As a Country Partner of BirdLife, NSS is in fact BirdLife in Singapore, where NSS's work includes the wider conservation targets of the global BirdLife partnership. In 2021, BirdLife, along with

might have worked against or delayed World Heritage inscription. BirdLife colleagues worked incredibly hard on this effort, and the Nature Society (Singapore) was one of the signatories to a letter sent to the President of South Korea urging relevant agencies to support the initiative. In July 2021 the World Heritage Committee endorsed the inscription of the Getbol, Korean Tidal Flats as a UNESCO World Heritage site, a key step in securing the

future of the Yellow Sea, which is the critical stopover point for millions of migratory shorebirds. Securing these tidal flats may well secure the future of the entire East Asian-Australasian Flyway.

Conservation Policy

2020 was to have been the "Biodiversity Super Year", with both the IUCN World Conservation Congress in Marseille and the 15th Conference of the Parties (COP) of the Convention on Biodiversity in Kunming scheduled within a month of each other. COVID pushed the Super Year to 2021 and blunted its profile and public impact, but the events remained crucial in our fight to halt or hopefully reverse the precipitous decline in biodiversity while there remains a chance, however slim. The Nature Society was represented (virtually) by Ms Ng Bee Choo, who serves as our representative to IUCN. Nature Society (Singapore) also supported a New and Urgent Motion tabled by our BirdLife Partner in Tunisia, Association Les Amis des

Oiseaux - "Motion N: Enabling effective attendance and participation of Members in future sessions of the World Conservation Congress". The Motion sought to redress the inequality of representation and participation at the Congress caused by lack of access to COVID vaccines, which resulted in in-person participation at IUCN that was largely restricted to Europe and the Global North. Direct voting on important Motions could only be done for IUCN members attending in-person; those who could not attend the Congress could only vote by proxy. Motion N outlined a more equitable way of voting, and hopefully a major asymmetry in representation related to the economic might and privilege of the Global North will be less of an issue for the IUCN family in the future.

Programmes

Every Singaporean A Naturalist, the Nature Society's flagship outreach and citizen science programme, was started in 2018 with a generous grant from HSBC Singapore. Ms

Sung Mei Yee was hired as NSS's ESN Programme Officer in 2018 and singlehandedly led the effort until 2021, when a second Programme Officer, Ms Eunice Tan, joined ESN. This was possible with the support of the Wildlife Reserves Singapore Conservation Fund, which has since been reconfigured as part of Mandai Nature. The creation of a second Programme Officer post will not only facilitate the expansion of ESN to more schools, it will pave the way to extend ESN to every Singaporean, as envisioned.

Partnerships

The effects of COVID went beyond the immediate and painful loss of so many lives around the world. Economic impacts at local, national and regional levels led to discussions on post-COVID recovery, such as "Build Back Better". The BirdLife Partnership sought to explore what a Green Recovery for nature conservation might entail from the perspective of different kinds of economies, urban vs rural communities, or degree of infrastructural

development of a given place. Working with BirdLife, NSS looked a ways that might allow different pillars of Singapore's Green Recovery to reinforce nature-positive attitudes, practices and policies. Also considered were the ways in which a Green Recovery might lead to the fine-tuning of physical space, landscaping, as well as recreational programmes in ways that create stronger bonds between people and the natural world around us.

Environmental education and the seamless integration of nature into outdoor and adventure-related educational programmes are areas in which the Nature Society has been working for many years. In 2021, NSS worked with Outward Bound Singapore (OBS) to share information and stories about natural history and conservation with OBS staff. Lester Tan, Sung Mei Yee, Kua Kay Yaw, and Shawn Lum led workshops for OBS Trainers on birds, marine conservation, plants, and general ecology. What was particularly rewarding was the enthusiastic exchange of information between OBS staff and NSS members: OBS

staff spend much time outdoors and many of them develop an intuitive understanding of ecosystems and wildlife from a cultural as well as ecological point of view. The hope is that this collaboration can lead to greater appreciation and empathy for nature among all OBS participants and stakeholders.

NSS continues to be an active participant in wider civil society in Singapore. NSS

and that resilient and diverse nature areas benefit people as much as they do flora and fauna.

Fundraising

The inability to meet regularly in-person did not stop Albert Liu, Ngo Kang Min, Andrew Lin, Ben Szeto, Kerry Pereira and others from working on strengthening the Nature Society's capacity for fundraising. 2021 saw important progress made on

"The Nature Society (Singapore) has always held that biodiversity is valuable and irreplaceable in myriad ways, and that resilient and diverse nature areas benefit people as much as they do flora and fauna."

participated in the Institute of Policy Studies' Reimagining Singapore Workshop in September 2021.
Sustainability and climate resilience are part of many (if not most) policy-related discussions held today, but biodiversity is not necessarily a prominent part of the sustainability equation. The Nature Society (Singapore) has always held that biodiversity is valuable and irreplaceable in myriad ways,

the Nature Society's membership and fundraising infrastructure.

Governance

A data breach following an attack on the NSS website was announced in late 2020. In 2021 more work was done to understand the nature of the attack on NSS's systems and to put measures in place to reduce the likelihood or severity of future data

breaches. Joe Lim from the NSS Secretariat did herculean work in understanding the data breach, in reducing our exposure to future attack, and was regularly in contact with the Personal Data Protection Commission on next steps in better securing NSS data.

Catching Up

As Singapore slowly emerged from the uncertainty and concerns that governed so many aspects of our lives and the life of the Nature Society, the second half of 2021 saw the first baby steps taken for the resumption of walks and in-person events. These activities were limited to groups of five or a few multiples of five, but they were the first promising signs of a nature conservation world less constrained by prolonged pandemic.

Looking Ahead

If the physical confinement of 2020 was an opportunity to think and reflect, 2021 allowed us to see how fine tuning of plans – and, where necessary, a more thorough revamp – would be implemented at the Nature

Society. Some of the topics under review in 2021 were the same that occupied our attention in 2020, but with a chance to begin translating ideas into action. There were many things that the NSS Exco and Council considered in 2021, and a few examples were:

- Fundraising and Membership: increasing funds and membership are worthwhile goals, but in what specific ways would they make the Nature Society more effective as a conservation science. outreach, and policyoriented organisation? Knowing why additional funds and members are needed and how best to use them to further NSS's conservation objectives is critical.
- Scientific Capacity: If the NSS makes strides in science – data collection, planning long-term studies, analysis of copious observation records, and better linkage of science to policy – we can be a more effective conservation group. Gaining greater scientific capacity can be

- one of the outcomes of a strategic fundraising effort and membership drive.
- Positioning in the conservation landscape: the Nature Society (Singapore) has been around for nearly 70 years, it has done much for nature conservation, and out of its membership have come many influential nature conservationists. Past achievements, however, do not guarantee continued relevance in a shifting conservation landscape. For example, today we have many more nature groups local and international, online communities wield influence and authority, and government agencies today do many things that NGOs traditionally do (wildlife study, outreach, community programmes, and more). Being relevant to nature conservation will require recognising and building on our strengths, as well as building capacity in areas that are important but need reinforcement.
- Regional and Global Conservation: one asset

- that NSS has are its regional and global networks such as the IUCN and our role as a BirdLife Partner. These are unique strengths, but we do not do enough to make the most of these remarkable resources and opportunities. At a local level we can develop synergies with groups that work regionally such as Mandai Nature, the Asian Species Action Plan, and the Asia Pacific Centre for Environmental Law.
- Engaging Large Constituencies: the nature photography movement has been gaining momentum with the advent of digital photography and social media. During the COVID pandemic, there has been an additional surge in nature photographers, and in the number of avid hikers. Today there are tens of thousands in each of these constituencies. Working in areas of shared interest could create a stronger and more diverse conservation community, one that could have longlasting positive impacts on

- nature study and conservation.
- Succession: This topic has been repeatedly raised at NSS Annual General Meetings. In 2021 the NSS Exco and Council included a number of younger members (i.e. 40 years and below) and there are plans to prepare a larger group, of all ages, to meet decision makers, NSS donors, and staff of the government agencies NSS regularly work with.

Disagreement and discord in group dynamics is unpleasant. I don't like it, and we are doing our best as an NGO to put into a place a mechanism for resolving conflict should it arise. When such episodes happen in the NSS membership, however, it encourages us to reflect on the mission of the Nature Society and what each of us can do to secure the future of natural habitats in Singapore and beyond, whether as individual NSS

"NSS will make mentorship in nature conservation a priority in the years ahead, to encourage and support the nature conservation leaders of tomorrow."

Implementation of this plan has begun. The formation of a Youth Committee in NSS was also an encouraging sign.

- Dynamics: Some NSS members will recall that during the 2021 Annual General Meeting, there were discussions over inclusion and leadership in NSS Special Interest Groups. This discussion continues and is a challenging one.
- members, as members of a Special Interest Group, or as people who love nature and wildlife.
- Encouraging Conservation Leaders: Many wildlife experts, conservationists, and some senior members of government agencies that deal with nature and conservation were introduced to natural history and biodiversity through the Nature Society. This was achieved

without having a formal mentorship programme. NSS will make mentorship in nature conservation a priority in the years ahead, to encourage and support the nature conservation leaders of tomorrow.

• Civil Society: Civil Society has been weakened in countries around the world in recent years. In Singapore, the number of civil society groups continues to increase, but this growth does not

Many things made 2021 a trying year for NSS staff, and I must acknowledge the amazing work of Joe Lim, Kerry Pereira and Sung Mei Yee in keeping NSS relevant and responsive throughout the COVID pandemic. Eunice Tan made key contributions to the ESN programme during her time with the Secretariat. Thanks also to Casey Chia for his work on Nature Society's IT systems.

Veerendra Patwa stepped up to serve as Hon. Treasurer in

"Nature Society (Singapore), I feel, must keep asking itself how it fits into the wider conservation space as well as the larger civil society landscape."

guarantee increased vibrancy and impact of the NGO sector. Nature Society (Singapore), I feel, must keep asking itself how it fits into the wider conservation space as well as the larger civil society landscape.

Thank Yous

The Nature Society would be greatly diminished if not for the dedication, expertise and inspiration of its Secretariat.

2021. Serving as an officebearer is time consuming and tiring, doubly so when juggling NGO duties with family and work; the COVID pandemic and many pressures that came with it made things even more difficult for volunteers. Sadly, Veerendra was not able to continue as NSS Hon. Treasurer but I am grateful for the time and sincere effort he put into the role. I also thank Andrew Lin for serving as our Acting Treasurer.

Serving as Nature Society
President is made much
easier, and a lot more
rewarding, when one has the
privilege of working with such
a talented Council, one that is
devoted to conservation.
When the Exco and Council
"walk the walk", they set an
example for me and others to
try and follow.

Our wonderful partnership with the Malaysian Nature Society continued to develop, despite our inability to meet for yet another year. I would like to thank MNS Headquarters, MNS President Prof Dr Ahmad Ismail, and our friends at the MNS Johor and MNS Negri-Sembilan-Melaka for their help and for their unwavering belief that when we work together, our members benefit, as does Nature. As do our communities and countries.

Many thanks go to our generous supporters. Large donors who supported major initiatives included Mapletree, Bloomberg Singapore, the RHT Raja Menon Foundation, and Mandai Nature. Members and members of the public donated without hesitation, and we will endeavour to fulfil

your faith in us by working as hard and as effectively as we can for people and for nature. The Singapore Bicentenary Fund generously extended the period for the matching of donations into early 2021. To say that we are appreciative recipients of the Fund is a great understatement.

Mr Leong Kwok Peng, who served as NSS Vice President from 2008 to 2019, returned to serve as Vice President in May 2021. His knowledge of nature and nature conservation, his rapport with stakeholders and decision makers, and his clarity of thought and reasoning were a source of awe as well as great comfort for me as President. Kwok Peng will continue to mentor NSS members and to provide wise counsel, but today he will step down as Vice President. Not only has Kwok Peng made an indelible mark on the Nature Society, but all Singapore has benefited from his vision, leadership and gift for consensus building.

Morten Strange joined the NSS Exco, first as Assistant Secretary, then as Hon. Secretary for three years.

Morten was already a legend in the natural history community for his pioneering work in bird photography and for being one half of Nature Niche's and Draco Publishing and Distribution, which he set up with his wife and fellow nature expert Ms Ng Bee Choo. Morten is a person who gets things done, who argues passionately for what he believes in, and who has a big heart. He led many key projects during his tenure as Hon. Secretary, such as the long-overdue renovation of the Nature Society office, the resolution (and resurrection) of our Advisory Council, and the streamlining of procedures and processes. I learned a great deal from Morten, even, or perhaps especially, when we did not agree. I will miss working alongside Morten. Because of his insistence on

proper succession planning, he leaves his post, and more generally the Exco and Council, in good hands.

Ms Evelyn Ng steps down today after several years as Asst Hon. Secretary. She had previously served as Hon. Secretary. Eve was part of the NSS Exco when I joined the Council as the Chair of the Plant Group. I have been Eve's husband since 2008, the year I was elected as NSS President. She has been an unwavering source of encouragement and support, and without her help and understanding I could not serve the Society. Eve has made me appreciate life and nature more than I ever did before, and her sense of duty and mission guide our approach to caring for and working to protect nature.

Goodbye

Mr Wong Yew Kwan passed away in December 2021. He was Singapore's first Commissioner of Parks and Recreation and helped transform Singapore into a Garden City. He entered the University of Malaya in the 1950s when the university was first established at Bukit Timah. Legendary botanist R.E. Holttum was one of Mr Wong's professors at the university. Mr Wong was a mentor to countless forest researchers, arborists, and horticulturists, among others. What was remarkable, perhaps

unimaginable today, was that even as Commissioner of Parks and Recreation, he was active in the Nature Society (the-then Singapore Branch of the Malayan Nature Society). Mr Wong carried out the first detailed study of local forests, publishing a paper in the Gardens' Bulletin Singapore entitled "Ecology of the Trees of Bukit Timah Nature Reserve". In the paper, Mr Wong pointed out that the work, which surveyed 3.24 hectares, required three and half years to complete. He added, however, that "the apparently long period required to achieve this lies in the fact that field work was carried out on Sunday outings, once a month, and sometimes inclement weather rendered some Sundays impossible for work." The energy, application, and expertise that guided Mr Wong's work for the Nature Society should inspire us to do more to realise the vast potential that resides amongst our diverse, talented, and dedicated membership.

"The energy, application, and expertise that guided Mr Wong's work for the Nature Society should inspire us to do more to realise the vast potential that resides amongst our diverse, talented, and dedicated membership."



Treasurer's Report

Financial Year 2021 or Year Ended 31 December 2021 (FY 2021) by Mr. Andrew Lin

2021 Activities Summary

Key highlights and finance related accomplishments in 2021:

- 1. Unqualified external audit report
 - Accounting books properly kept in accordance to regulations.
 - No non-compliance observed relating to requirements as an IPC and fund raising.
- 2. At the end of FY 2021, the net income and expenses resulted in a Net Surplus of \$\\$557,069 (\\$128,641, FY2020) increasing the Total Asset Value to \$\\$1,959,513 (\\$1,405,670, FY 2020).



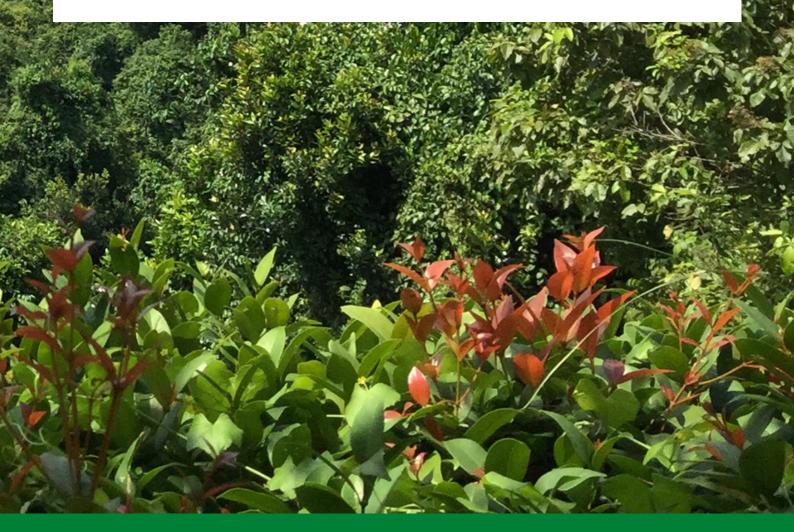
- 3. In FY 2021, the Society did not organize any major fund-raising events as our core operations continued to be hampered by the COVID-19 pandemic. However, the Society continued to be the choice beneficiary of many individuals, corporates, event organizers and the government with regards to donations and grants
- 4. Continued financial prudence.

Financial Position Summary

Below table provides a summary of financial position and use of funds in 2021:

Funds	1/1/2021	+ Income	- Expenses	31/12/2021
General	1,274,851	759,752	-270,100	1,764,503
Restricted	108,686	166,779	-99,362	176,103
Total	1,383,537	926,531	-369,462	1,940,606
NET SURPLUS	128,641			557,069

(All numbers in Singapore \$)



The table below provides more insights of the Society's income and expenses for internal management control:

Income	Amount		Details	
Donations	\$	262,302	NSS Members, Members of the public, Mapletree Investments Pte Ltd \$31.5K, Bloomberg (S) Pte Ltd \$53K, SAP Pte Ltd \$8.5K	
Memberships	\$	39,884	Membership subscriptions	
Interest	\$	2,454	Interest from fixed deposit accounts	
Events & Activities	\$	29,508	Sales of field guides, books & T-shirts, Nature Watch, Bird Race, Kayaking & WRSCF admin fees	
Other Income	\$	428,173	Bicentennial Community Fund (BCF) matching grant \$400K. Other grants & subsidies \$28K	
NCSS grant	\$	105	Grant for Zoom subscription	
Restricted – Wildlife Reserves Singapore Conservation Fund	\$	164,105	Grant from Wildlife Reserves Singapore Conservation Fund (WRSCF) for Every Singaporean A Naturalist Project (ESN)	
Total Income (A)	\$	926,531		
Expenditure				
Events & Activities	\$	57,749	SIG's expenses, Bird Race, Publications - Nature Watch, Pang Sua Book & Green Rail Corridor	
Charitable Activities	\$	206,695	Salaries & CPF, SGUTP traineeship, insurance, maintenance, utilities, other administrative expenses, fine, depreciation of fixed assets	
Governance Cost	\$	5,656	Audit fees	
Restricted - Capital fund	\$	350	Depreciation of laptop under VCF Info- communications Technology Grant	
Restricted - WRSCF	\$	99,012	ESN staff salary & related expenses	
Total Expense (B)	\$	369,462		
Net Surplus (A) - (B)	\$	557,069		

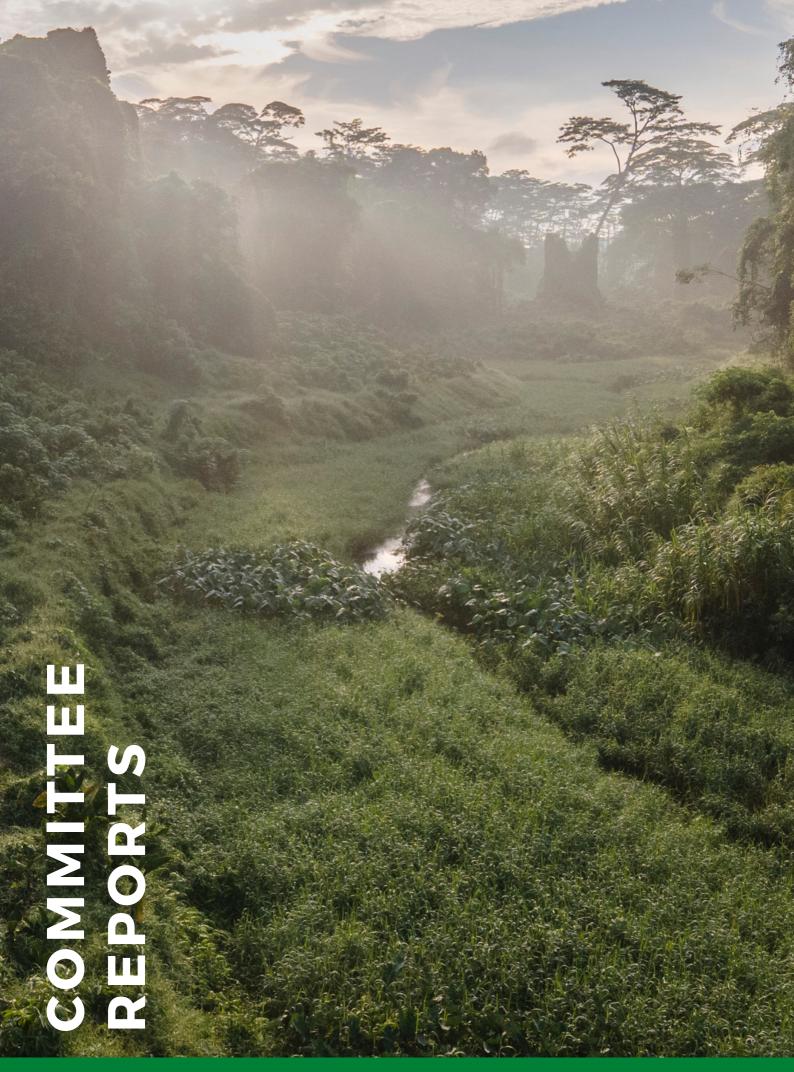
Conclusion

- 1. The Society's financial position remains healthy with its key reserves (the freehold property and cash) intact.
- 2. For Financial Year 2021 (FY 2021), our income increased to \$926,531 from \$\$401,980. The Society's source of income is mainly grants and donations. The largest grant received in the FY is \$400,000 from the Bicentennial Community Fund.
- 3. Our expenses were \$369,462 up from S\$273,339. This is due mainly to increase in staff costs. We are likely to hire more staff in the new Financial Year, as the Society will be adopting new systems and technology (i.e. Salesforce and Xero) too. We are grateful that the necessary grants and resources has been secured for us to embark on this journey. FY 2021 ended in a net surplus of S\$557,069 (up from \$128,641 in 2020).
- 4. With the easing of the COVID Restrictions, there is much to do in the new FY. The Society is eager to be on the move again with the revival in its member's and fund-raising activities in the new FY.

Most of all, we would like to thank our members, volunteers, and supporters who had contributed to our committees, Special Interest Groups and Executive Committee in FY 2021 to make the above possible.

Looking forward to working with you in the new FY!





CONSERVATION COMMITTEE

HDB

Dover/Ulu Pandan Forest

A feedback on the Dover/Ulu Pandan Forest was submitted to HDB after studying HDB's environmental baseline study on 15 Jan 2021.

The feedback contains NSS proposal for the conservation of the whole area as a public-cumnature park.

Mt Pleasant Estate & Yishun Miltonia

An engagement session was held on 10 Aug 2021 to discuss the environmental baseline study findings of the 2 sites slated for housing development.

A follow up session was held on 13 Sep 2021 on the Yishun Miltonia site.





Tengah

An engagement session held on 17 Aug 2021 to discuss the environment baseline study of the following sites:

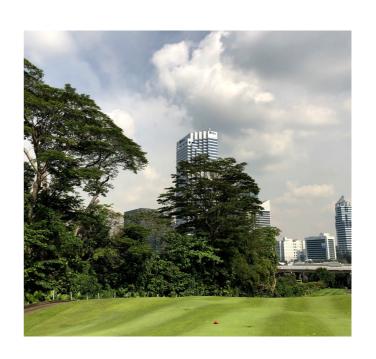
- Tengah North and South (HDB);
- Tengah Forest Fringe Phase 1 (NParks);
- Jurong Region Line (JRL)
 Hong Kah Station in Tengah
 (LTA);
- Jurong Innovation District (JTC)

Keppel Club

An engagement session was held on 9 Sep 2021 to discuss the environmental baseline study findings of the site slated for housing development.

Choa Chu Kang/Rail Corridor & Queensway East

An engagement session was held on 2 Dec 2021 to discuss the environmental baseline study findings of the sites slated for housing development.



JTC/Nparks/MND

Kranji Woodland

In Feb 2021 we posted on social media some drone photos of the Kranji Woodland - expressing our shock of the clearance.

There were much public outcry.

Nparks and JTC soon called for a urgent meeting.

JTC explained that the clearance was for the Agri-Food Innovation Park but apologised that part of the woodland was cleared by their contractor before the environmental baseline study

and EMMP were done.

JTC said that they will investigate this serious incident.

JTC made a public statement of the incident.

There were much buzz in both the mainstream and social media over this incident that went all the way up to parliament.

An engagement session was held on 22 Sep & 29 Oct 2021 to discuss the environmental baseline study findings and mitigation measures of the site.

May 2019





EDB

Kranji Reservoir

A stakeholder engagement was held on 7 Jan 2021 to discuss the scoping of an EIA to be conducted for a potential floating photo voltaic system for Kranji Reservoir.

An engagement was held on 23 Jun 2021 to discuss the EIA findings on the floating photovoltaic system on Kranji Reservoir.

MND/Nparks/NSS

Sungei Pang Sua Kayak

We organised a kayak trip on 30 Mar 2021 to survey Sg Pang Sua which we consider to be an important nature corridor linking the Rail Corridor, Kranji Woodland, Kranji Nature Park.

and Sg Buloh Wetland Reserve. This includes an important mudflat at the estuary of Sg Pang Sua.

16 participants took part - half from NSS and half from MND & Nparks.

Minister Desmond Lee was one of the participant.

There is optimism on the future of Sg Pang Sua.



PUB

Bukit Kalang/Upp Thomson Rd pipelines

An engagement was held on 4 Apr 2021 to discuss the EIA and EMMP done for 6 worksites for the pipeline laying (pipe-jacking) works from the Bt Kalang service reservoir to Upper Thomson Rd. Study areas include 50m around the worksites and 5m width along the pipeline corridor.

One of the worksites is within the CRL AlWl worksite, 1 within

SICC, 1 within Bt Kalang service reservoir and the rest in open areas along the Island Club Rd.

Upper Pierce Reservoir

An engagement session on 23 Jul 2021 to discuss the EIA findings of the proposed floating photovoltaic that will be installed on the reservoir adjacent to Chestnut Water Work.

Tengeh Reservoir

A site visit was arranged on 8 Oct 2021 to visit the floating photovoltaic system on Tengeh Reservoir.

TENGEH RESERVOIR



LTA

Clementi Forest

An engagement session on 30 Jul 2021to discuss the CRL MRT station site plan adjacent to Clementi Forest.

A workshop was held on 10 Nov 2021 to discuss on the CRL MRT station design.

Rail Corridor

An engagement session on 15 Nov 2021 to discuss the Downtown Line 2 extension across Sg Pang Sua and Rail Corridor near Sg Kadut Ave.

NTU - Peng Kang forest

An engagement session on 27 Dec 2021 to discuss the proposed

Jurong Region Line (JRL) works in the area.

NYC/Nparks/JTC/ MCCY

OBS Coney Island

An engagement on 30 Apr 2021 to discuss the landscape strategy for the OBS Coney Island campus.

Strategy includes green buffer, habitat creation, rain garden, wetland etc.

Public and visitor information was discussed.

An engagement session on 20 Oct 2021 to discuss the EMMP for the OBS Coney Island campus development.

Nparks/LTA

Rail Corridor

An engagement meeting on 7 Jun 2021 to discuss the proposed new road linking current Dairy Farm Rd to Hillview that will involve an underpass slicing through the Rail Corridor.

A 28m x 200m wide of the Rail Corridor will be reinstated and replanted once the road is completed.

An engagement session on 26 Oct 2021 to discuss the wildlife survey report for this road development site. Study site is about 2 ha.

Villa Verde Park

A stakeholder session was held on 6 Mar 2021 to discuss the overall park design.



URA

Participated in a series of workshops to discuss URA Long-Term Plan Review & Planning for Green & Blue Spaces held from Aug - Dec 2021.

Alexandra Hospital

A site discussion was held on 5 Aug 2021 with NUSH design team to discuss the future expansion of Alexandra Hospital and its integration with the Rail Corridor.

MINDEF

Western Catchment

An engagement session held on 13 Aug 2021 to discuss EIA

findings for the SAFTI City Sector 1 site.

JTC

Woodland Wafer Fab Park

An engagement on 20 Dec 2021 to discuss the biodiversity baseline study findings of the 7ha forested area along Woodland Road slated for industrial development.

SFA

Lim Chu Kang Master Plan

A stakeholders' engagement meeting held on 31 May and 16 Jul 2021 to gather feedback on the future redevelopment of the site for future agri-food production hub.





Green Corridor

Friends of the Rail Corridor (FORC)

6th FORC meeting was held on 25 & 26 Nov 2021 - updating on enhancement work on the Rail Corridor.

PUB Green Run

Organised by Groundswell for PUB, the PUB Green Run (formerly Green Corridor Run) was a virtual race held from 18 Sep to 31 Oct 2021. As in previous years, we were the charity partner for this event.

\$17,500 was raised to be donated to NSS's rewilding of the Rail Corridor.

Rewilding the Rail Corridor

Discussion is ongoing with Nparks to rewild the Kranji stretch of the Rail Corridor and beyond. We planned to have full time reforestation officer after obtaining corporate funding.

Publication

NSS & Cicada Tree Eco Tree launched the book 'Pang Sua Woodland - Sanctuary Unveiled Along the Rail Corridor' on 13 Mar 2021.

The book documented the biodiversity, heritage and our suggestion for a public park.

Social Media

NSS Facebook page has over 23000 followers

NSS Facebook group has also over 53000members

We Support the Green Corridor Facebook page has over 14,000 followers

Note:Most of the engagement were held virtually.

EDUCATION COMMITTEE

SUMMARY OF ACTIVITIES

S/N	ACTIVITY	DATE	REMARKS
01	ONLINE WORKSHOP: FUN WITH MANGROVE WILDLIFE	20-FEB-21	SPEAKER: GLORIA SEOW
02	ONLINE TALK: WILDLIFE OF MESANGAT WETLANDS, KALIMANTAN	24-APR-21	SPEAKER: ROB STUEBING
03	ONLINE WORKSHOP: FUN WITH BACKYARD BUTTERFLIES	25-APR-21	SPEAKER: SUNG MEI YEE
04	ONLINE TALK: MIGRATORY BIRDS OF THE MALAY PENINSULA	26-JUN-21	SPEAKER: DR YONG DING LI
05	ONLINE WORKSHOP: FUN WITH SINGAPORE MAMMALS	03-JUL-21	SPEAKER: GLORIA SEOW
06	ONLINE TALK: ORANGUTAN FOSSILS - CONSERVATION LESSIONS FROM THE DEEP PAST	28-AUG-21	SPEAKER: LIM TZE TSHEN
07	ONLINE WORKSHOP: FUN WITH SINGAPORE SNAKES & FROGS	05-SEP-21	SPEAKER: NATALIE QUAH
08	ONLINE TALK: WHY DO BIRDS FALL OUT OF THE SKY	16-OCT-21	SPEAKER: DAVID TAN
09	ONLINE WORKSHOP: FUN WITH INSECTS IN SINGAPORE	06-NOV-21	SPEAKER: SEAN YAP
10	ONLINE WORKSHOP: FUN WITH FOREST TREES & PLANTS IN SINGAPORE	26-DEC-21	SPEAKER: DR NGO KANG MIN

Note:

- All 10 online workshops and talks were organised and/or hosted by Ms Gloria Seow, Vice Chairperson of the Education Committee.
- All online talks were co-organised and co-hosted with Dr Yong Ding Li of the NSS Bird Group.

Acknowledgements

A big thank you to all speakers as well as to Dr Yong Ding Li and Mr Timothy Pwee for hosting/co-hosting the various sessions.

Recordings of the 10 sessions can be found on the NSS YouTube Channel where they continue to receive views, as well as on the Fun with Nature blog at http://funwithnature.blogspot.sg/.

The blog is still ranked #1 on Google under the search terms 'Fun with Nature'.





BIRD GROUP

The Bird Group's usually busy calendar of physical activities was scaled back due to COVID-19 but other opportunities and endeavours were seized and scaled up.

Birdwatching Walks

Five bird walks were conducted, three in April 2021 at Bishan—Ang Mo Kio Park, Dairy Farm Nature Park and Sungei Buloh Wetland Reserve; one in September 2021 at Pulau Ubin; and another at Gardens by the Bay in December 2021.

Bird Censuses

We continued our bird censuses, which were mostly conducted by the site leaders and small numbers of volunteers, due to COVID-19. These included the Asian Waterfowl Census, Parrot Count, Annual Bird Census, Mid-Year Bird Census, and Raptor Watch.

Supporting ESN

In support of ESN, the Bird Group conducted an online talk on Kingfishers for the children at My First Skool at 6 Segar Road in March 2021. The Bird Group also helped train ESN teachers on field identification of birds with a bird walk at Bishan-Ang Mo Kio Park in September 2021.

Collaboration with NParks

The Straw-headed Bulbul Working Group was set up as an NSS-NParks collaboration and involved many stakeholders. Also, the Bird Group continued to collaborate with NParks for the conduct of shorebird surveys at Chek Jawa, Pulau Ubin.

Collaboration on Parrot Trade Research

The collaboration with Birdlife and Mandai Nature resulted in the publication of a joint paper on the parrot trade in Singapore published in the peer-reviewed journal Oryx. This was followed by a session to share the findings and recommendations with NParks.

Collaboration with MNS

The Bird Group gave a talk on Birding in Singapore & Bird Conservation in East Asia under the MNS Negeri Sembilan/Melaka Facebook Live platform in January 2021. We also gave an online talk on Singapore raptors at the invitation of MNS for their flagship Raptor Watch event in March 2021.

Collaboration with eBird

In 2021, we became the country partner for eBird in Singapore, to

promote birding, the recording of bird sightings, and for data quality assurance on the international citizen science

Singapore Red Data Book Revision

We participated in the revision of the status of birds for the next edition of the Singapore Red Data Book.

NSS-OBS Collaboration

We supported the NSS-Outward Bound School collaboration in the recce and conduct of bird walks for OBS instructors in September 2021.

Webinars

Four webinars were hosted/co-hosted by the Bird Group:



37th Singapore Bird Race Closing Webinar

Birdlife Int'l Director -Vinayagan Dharmarajah

MC - Geoff Lim

Mapletree Group CCO -Wan Kwong Weng Mapletree Chairman -Edmund Cheng











All Consider Lee





Bird Group Chairman -Tan Gim Cheong

Minister Desmond Lee

NSS President -Dr. Shawn Lum

Bird Group vice-Chairman Lim Kim Chuah

(1) Wildlife of Mesangat Wetlands, Kalimantan, (2) Migratory Birds on the Malay Peninsula, (3) Magic of Bird Migration (NSS-Leica webinar), and (4) Why do Birds Fall Out of the Sky.

37th Singapore Bird Race

The Bird Group gave a talk on Birding in Singapore & Bird Conservation in East Asia under the MNS Negeri Sembilan/Melaka Facebook Live platform in January 2021. We also gave an online talk on Singapore raptors at the invitation of MNS for their flagship Raptor Watch event in March 2021.

Publications

Two articles on the bird race, including one from a personal

perspective, were published in the Apr-Jun 2021 issue of Nature Watch.

Communications - Blog & Facebook

The Singapore Bird Group blog continues to be an important platform to communicate with the birding community. In addition to our monthly bird reports, periodic raptor reports, and census reports, ten articles were published on the blog. The Singapore Birders Facebook continues to be active with postings on birds.

Government Agencies Engagement

We attended engagement/feedback sessions with various government

agencies on development plans for (1) Keppel Club BTO, (2) Yishun Miltonia BTO, (3) OBS Coney construction, (4) Kranji Woodlands, (5) PUB Coastal Protection, and (6) Woodlands Wafer Fab Park.

Tertiary Student Projects

We provided expert inputs for an NTU student project on the Green Rail Corridor, an NUS student project on Lorong Halus Wetlands, and an NTU student project on raptor migration.

News Channels

The Bird Group provided expert knowledge, interviews and rare bird photos, to various news channels: (1) ChannelNewsAsia video story on the Asian Koel, (2) Channel 8 news interview on the Fairy Pitta, (3) ZaoBao feature on the Spotted Flycatcher, (4) ZaoBao feature on the Mandarin Duck, (5) WanBao feature on the Oriental Dwarf Kingfisher, (6) WanBao feature on the Greystreaked Flycatcher, (7) Straits Times article on peacocks, and (8) Straits Times article on the Cinereous Vulture.

Acknowledgements

The Bird Group would like to thank all members, volunteers and participants for their time and support.



BUTTERFLY & INSECT GROUP

Conservation

Amy has been working on expanding the habitat of the Common Rose and Common Birdwing at the Tanglin area. She has passed some Aristolochia acuminata plants to SBG managers, private home owners around SBG and the St George's Church. Amy is also working with NParks managers at Pulau Ubin on the conservation of these two butterflies.

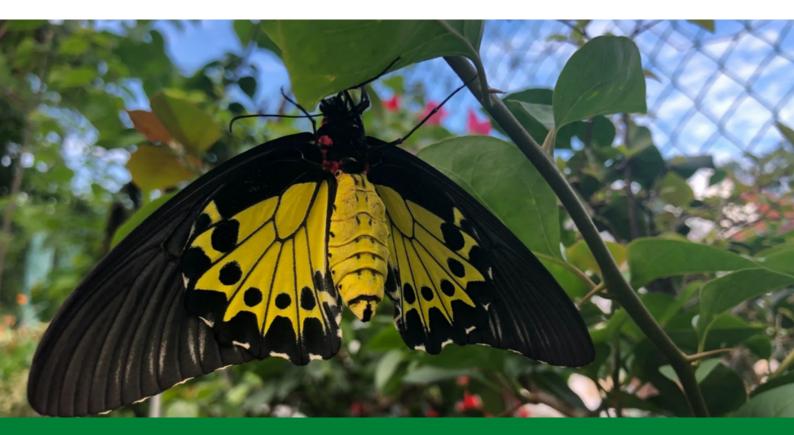
Kang Min is in the Friends of

Clementi-Ulu Pandan Nature Corridor for the Butterfly Sanctuary project. Main partner is Ngee Ann Polytechnic.

Moths

The Moth team (Jerome, Gan, Anuj and others) continue to advance work on the Moth Red List revisions.

NSS BIG mobilized its internal funding to hire Saloni Swaminathan worked for nearly 2 months part-time and assisted



NSS BIG to digitize moth specimens at the Lee Kong Chian Natural History Museum.

BIG submitted a manuscript draft on their assessment of moth diversity from Ubin as an outcome of the CUBS (Comprehensive Ubin Biodiversity Survey) to NParks in June 2021. NParks has not replied.

Publications

Contributions to Pang Sua Woodland book, Alexandra Woodland book.

Media & Outreach

Anuj was featured in the Straits Times regarding the resurgence of tropical swallowtail moths in July 2021.

Halloween ST article by Yi-Kai Tea about cannibalistic butterflies.

Walks in 2021 – Bukit Brown, Lornie Nature Corridor.

Research

Genetic study of Common Rose, Common Birdwing and Common Mormon, in collaboration with Republic Polytechnic.

Leadership

Abiel Neo will takeover the Chairperson position after the Annual General Meeting.

Acknowledgements

The Butterfly & Insect Group would like to thank all members, volunteers and participants for their time and support.



JALAN HIJAU GROUP

National Day Parade 2021

Jalan Hijau took part in a series of Green Group Discussions for National Day Parade 2021 and subsequently 2022, towards a greener and zero waste celebration. Discussions focused on issues such as the fun pack design and contents as well as food waste minimisation.

4th CANA Film Festival

Hang Chong accepted an invite to be a panellist for post-screening discussions at 4th CANA Film Festival for the water sustainability film "Sustainable Nation", held on 12 June and 27 November.

Singapore Youth Voices for Biodiversity Green Parties

Hang Chong accepted an invite as a society representative at the Singapore Youth Voices for Biodiversity Green Parties Engagement on 12 December.

Online Event

Our member Dave Lommen shared about his environmental journey in an online session on 18 December, titled "Green Conversation: My Green Journey (so far)".

Acknowledgements

The Jalan Hijau Group would like to thank all members, volunteers and participants for their time and support.

MARINE CONSERVATION GROUP

2021 had been a slow year for physical activities by the Marine Conservation Group due to the restriction in numbers or persons allowed due to the Covid19 pandemic. Nevertheless, the group was still actively involved with some governmental agencies initiatives and participating in engagements to minimize impacts on the marine environment for development projects. Members of the group were also invited to give online talks to organizations and interviews by the media.

Government Engagement

In 2021, the Singapore government announced the launch of the Singapore Green Plan 2030. Various governmental agencies came up with initiatives to support the plan and stakeholders were engaged to provide inputs and feedback. The MCG were involved with the URA Focus Group Discussion on Green and Blue Spaces for the Long Term Plan Review (LTPR), MSE National Action Strategies

for Marine Litter (NASML), PUB Coastal Protection Plan and NParks Marine Wildlife Protection Discussion.

The MCG represented NSS in a number of NParks' Friends of Park Network, namely the Friends of Marine Parks (FMP), Friends of East Coast Park (FoECP), and Friends of Ubin Network (FUN).

Development Projects

Engagements for Developmental Projects includes Sentosa Development Corporation's Light Activation on Seringat-Kias, Reclamation of Pedra Branca, Shell's Bukom SBM Pipeline Replacement, Outward Bound School's Development of Coney Island Campus and Singapore Food Agency's Barramundi Asia Fish Farm.

Outreach

MCG organized a Young Marine Biologists Week for primary school students to educate them

on marine life. There were a few invitations to give talks on marine related topics, such as Meridien Primary School on mangroves, SportSG on marine debris, and Ngee Ann Polytechnic Environmental Rangers Club on marine conservation.

Horseshoe Crabs

The vice-chair of the group, Lester Tan was invited to chair the session on Public Education. Protection & Management for the International Conference of Horseshoe Crabs Science and Conservation.

He was also featured in a Japanese magazine as one of the horseshoe crab enthusiasts in Asia.

Etiquette

Due to the closure of bordersduring this period, many Singaporeans went out to explore the nature areas in Singapore. The increased in footfall at the intertidal areas created quite a stir and was reported by the mainstream media. Chairman of the group was interviewed by Channel News Asia regarding the impact of the increased footfall.

Biodiversity Friends Forum

While the restrictions to number of persons for group activities had limited the group from organizing too many physical activities, MCG managed to conduct a horseshoe crab rescue and research event for the



Biodiversity Friends Forum.

Pesta Ubin

We also participated in the annual Pesta Ubin, organizing the mangrove kayaking sessions

OBS Coney Island

The OBS Coney Island Campus engagement session led to a collaboration with them to conduct training sessions on marine debris and beach cleanups for all their instructors, who, hopefully, would pass on the knowledge to the Secondary 3 student cohort that goes through their programme.

Looking Ahead

MCG's plan for the 2022 is to resume the activities and programmes that were conducted before the Covid19 pandemic. We are looking into expanding the number of horseshoe crabs monitoring sites.

Acknowledgements

The Marine Conservation Group would like to thank all members, volunteers and participants for their time and support.



NATURE RAMBLER GROUP

Covid-19 Restrictions

Unfortunately, due to Covid-19 restrictions, we were unable to conduct any activities from Jan-Dec 2021.

Looking Ahead

With restrictions easing, we have resumed our rambles in Jan '22 and look forward to having you join us for them.

Acknowledgements

The Nature Ramblers Group would like to thank all members, volunteers and participants for their time and support.



PLANT GROUP

Biodiversity survey of Turf Club Ravine

In February, members of the Plant Group continued with plant surveys of the secondary forest at the old Turf Club racetrack in Bukit Timah. Surveys had already begun in December the previous year. We found a total of 168 species representing 73

plant families. Of these, 16 are listed as threatened species in the Singapore Red Data Book.

Plants of NTU

In March, group member Bian Tan gave a slide talk entitled "Plants of NTU" for the NTU webinar series on wildlife at NTU. The audience consisted mainly of students and residents of NTU. The talk touched on the



The VSG participated along with other SIGs to undertake a biodiversity study of the ravine at the old turf club. The study was commissioned by Centuars (a sports & recreation company). Noteworthy was the discovery of a Wagler's pit viper at the site.

Plant Survey of Sungai Pang Sua

In March, NSS members surveyed the east bank of Sungai Pang Sua. A total of 78 species were found in 36 families, out of which 5 species are listed as threatened in the Singapore Red Data Book.

Alexandra Woodlands

Plant surveys began in October, and found 123 species representing 56 families. Fifteen of these species are considered threatened in the Singapore Red Data Book.

Conclusion

The Plant Group is small and we welcome new members, no matter how much or little your experience with plants. If you would like to join us, please contact Bian Tan or any NSS officer or staff.

Acknowledgements

The Plant Group would like to thank all members, volunteers and participants for their time and support.



VERTEBRATE STUDY GROUP

Study on Sunda Pangolins

The Vertebrate Study Group (VSG) of Nature Society (Singapore) had been collecting data of sightings and roadkills of Sunda pangolin since mid 1990s, Kelvin Lim having been in charge of compiling the records. In March 2021, Marcus Chua, Tony O'Dempsey and Ng Bee Choo proposed that NSS hire a

part-time research assistant to geo-reference records of sightings and roadkills of Sunda pangolin across Singapore. Mr. Khairuldin Muhammad was hired as part-time research assistant from June-Oct 2021 for the work. Data from all members of the Sunda Pangolin Working Group were collated. In total, 482 pangolin rescues, roadkill and sightings records from 1996 to the end of June 2021 were geo-referenced.



Biodiversity Study at the Old Turf Club

The VSG participated along with other SIGs to undertake a biodiversity study of the ravine at the old turf club. The study was commissioned by Centuars (a sports & recreation company). Noteworthy was the discovery of a Wagler's pit viper at the site.

Wild Animals of Singapore 3rd Edition

VSG members led by Nick Baker also spent 2021 writing up some sections of the new edition of Wild Animals of Singapore due to be completed at the end of 2022.

Acknowledgements

The Veterbrate Study Group would like to thank all members, volunteers and participants for their time and support.



