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BIRDING IN SINGAPORE AND THE CHALLENGES OF THE 21ST CENTURY

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INTRODUCTION

Birdwatching became popular with Singaporeans around the1980s when the then Singapore Branch of the Malayan Nature Society (MNS), now Nature Society (Singapore) (NSS), set up a Bird Group (BG) (Wee, 2006b; Wang & Hails, 2007). The early years witnessed birdwatchers serving as citizen scientists, observing and collecting field observations that proved useful to ornithologists (Wee & Subaraj, 2009). Things took a turn after 1990 when activities became more recreational and less scientific (Wee & Tsang, 2008). The necessity of a scientifically-inclined group to complement the mainly recreational BG saw the emergence of the Bird Ecology Study Group (BESG) in 2005 (Wee, 2006a).

In the early 2000s, bird photography became popular when affordable digital cameras became available (Tsang et al., 2009). A small group of enthusiasts approached the NSS with a proposal to revitalise its then dormant Photo Group but unfortunately the overture was spurned (Wee & Subaraj, 2009). This led to the formation of the Nature Photographic Society (Singapore) and a number of photographic e-forums that directed their attention on the local fauna. Aggressive and focused in their aims at getting their perfect images, they soon led the field in bird sightings (Chan et al., 2007). Their excellent photographic studies of bird behaviour received the attention of the BESG and together they popularised the study of this long neglected aspect of local birding.

Naturally, hostilities and suspicions were rampant as the dynamics of birdwatching were being rewritten. However, competition proved to be an excellent outcome to the more than two decades of complacency in local birdwatching. And things are slowly changing. Currently, there are signs of stirrings amidst calls to scientifically observe birds instead of merely looking at them. No doubt with time and the entry of younger and more knowledgeable leaders, the different players will slowly come together to work for the good of birdwatching in general and ornithology in particular.

This article examines the strengths and weaknesses of past birdwatching practices, the changes that have taken place during the last few years, and what must be done to bring local birdwatching to a higher level of excellence to meet the challenges of the 21st century.

LOOKING AT BIRDS

The slew of activities like guided walks, bird races, and habitat surveys were initiated by the mainly expatriate birdwatchers when they introduced birdwatching to the locals (Wee, 2006b). Such activities helped to hone birdwatchers' skills in field identification of birds. And so birdwatchers indulged fulltime in listing habitat after habitat that served the society well. A comprehensive list of birds helped partly to convince the Singapore government to establish the Sungei Buloh Wetland Reserve, even though every single subsequent conservation proposal was rejected (Wee & Hale, 2008). Lists similarly helped to dissuade the government from clearing an area of mature forest that was part of a larger nature reserve for a proposed golf course (Wee, 1992; Francesch-Huidobro, 2008). However, excessive indulgence in listing came at the expense of scientifically studying birds. As according to Mynott (2009: 83), listing "is an innocent pleasure, which is likely to become a habit, though then of course, like other habits, it may morph into a preoccupation, eccentricity, or obsession. And birdwatching is such a habit."

An excellent example illustrating the excesses of listing was seen during the annual figging of the *Ficus benjamina* tree at the summit of the Bukit Timah Nature Reserve. Waxing lyrical about the bird diversity the fruiting tree attracted, birdwatchers were merely interested in generating a list of species, never caring as to why the birds arrived—be it to feast on the syconia, to eat the insects, or to predate on the birds that were attracted to the syconia. Birdwatchers were similarly disinterested in how the frugivores dealt with the syconia—whether pecking, swallowing, or mandibulating; the interspecific interactions that developed with so many different species coming together at one time; and the hierarchy of feeding. A perceptive young birder commented that many birdwatchers "are constrained by personal inadequacies to make just mere listings of the species present, which does not do real justice to what is being observed

in front of our eyes" (D. L. Yong, pers. comm.). But were they really constrained by inadequacies or was it lack of encouragement by their peers?

Although a recreational group, the BG should do more to encourage members to observe birds. This would help sustain their interests longer than merely looking at birds. Newcomers attracted to recreational birdwatching should be exposed to activities that challenge more than their ability to identify birds. The annual bird race, for example, should be revamped to include innovative aspects that require participants to use their observational skills. Besides locating species by sight, identifying them by calls should once again be allowed. The ban imposed a few years earlier was definitely a retrogressive step. After all, in a forested environment, a bird is more often heard than seen. And since the camera is fast becoming a useful tool in birdwatching, why not include a photographer in each team. Images of birds and their behaviour can then be included as extra criteria for the race. Call and song documentation can be added to make the race more challenging. There can even be separate categories—identification, behaviour and vocalisation. Alternatively, newcomers can indulge in listing while older and more experienced participants can be on the lookout for behaviour and/or vocalisation. After all, there is absolutely no need for older and more experienced members to persist in proving to themselves that they are the best.

Another activity that can be introduced is what Moss (2005) described as "The Big Sit". This sedentary version of a bird race can involve teams staying put in a single place for 24 hours, documenting all the species seen and heard. Or novice birdwatchers can be encouraged to regularly visit a convenient site over a period of a year to list the species observed as well as studying bird behaviour, both of which are a more relaxed pastime than the stressful bird race.

There is hope yet as the theme of the 2009 annual bird race was "Going Green" where participants were to use public transport or walk from one point to another.

STUDYING BIRDS

Birdwatchers have always served as citizen scientists, recording bird sightings and detailing aspects of bird behaviour (Wee & Subaraj, 2009). In the 1950s and 1960s when the NNS was part of the pan-Malaysian MNS, the Malayan Nature Journal that served nature enthusiasts on both sides of the causeway carried many short letters by birdwatchers. As the eminent ornithologist Sreedharan (1996: 33), in a talk to Singapore members, lamented: "Each trinket, on its own, constituted very little to the main body of information, but over the years, all of them put together gives us a better idea of bird behaviour than a purely scientific approach would have done." He further added that birdwatchers tend "to learn more and more about less and less"—implying that they can recognise more bird species but know less and less about each.

The BESG revitalised interest in bird behaviour when it started posting snippets of bird behaviour in its weblog http://besgroup.talfrynature.com. Bird photographers and novice birdwatchers responded enthusiastically. Assisted by the BESG in the interpretation of their excellent photographic studies, their postings made a powerful impact on the birding scene. The weblog proved hugely successful and currently with more than 1,550 posts, has attracted more than 1.2 million visitors over a period of four years (Tsang et al., 2009). The thirst for such information has proved insatiable, but much more needs to be done. A casual examination of Wells (1999, 2007) will show that there are still many gaps in our knowledge on the breeding cycles of many local and regional species. To move away from "twitching" and contribute to ornithological information may involve moving out of the comfort zone, but it can easily be done with proper leadership.

An aspect that has been so far neglected is the study of vocalisation. Years ago, a tape of common bird calls/songs was produced but there has not been any follow-up study. And so far, there has only been a singly paper published on this subject (i.e. Lin & Ong, 2006) by birdwatchers.

According to Constantine & The Sound Approach (2006: 13), "…bird sound is gloriously varied and more astonishing than any plumage." We know that male birds sing, but we are generally unaware of species in which the females also sing. We know that birds have different calls for different purposes related to territoriality, courtship, sex, mutual protection, information sharing, etc., but we have yet to document them. We also know that the black-naped oriole (*Oriolus chinensis*) has a repertoire of at least seven calls (Gloria Seow, pers. comm.), but what about the other few hundred species? And how about dialects: e.g., how different are the calls/songs of the resident Asian koel (*Eudynamys scolopacea*) compared to those migratory individuals? A recent casual recording of the strange cries of a pair of these koels led to the discovery of the first recorded begging-call mimicry for the species (Mobrand & Payne, 2007). This shows that many aspects of bird sounds are similarly just waiting to be discovered.

Field guides do provide calls and songs but in most cases they oversimplify the labeling, not realising that most birds use the same sounds for a variety of signals (Constantine & The Sound Approach, 2006). Again, the variations in transcriptions found in different guides limit their usefulness. Besides, a large majority of bird sounds are too complex

and varied for simple transcriptions. This makes it all the more important for birdwatchers to listen to birds a little more seriously (Mynott, 2009). With the advances in acoustic technology and the digital revolution, recording bird sounds is accessible to all. Even mobile phones and MP3 players can be used. Obviously there is a need to break the psychological resistance to unfamiliar technology and technical-looking graphs, but this should not be a problem among the younger birdwatchers. After all, this would make birdwatching still more challenging, not to mention interesting. To again quote Mynott (2009: 158) "…we can both enlarge and enrich our perceptions of birds, and in particular aid our recognition of them, by attending more to what we can hear than what we can see."

PHOTOGRAPHING BIRDS

Birdwatchers by tradition go into the field with a pair of binoculars and record observations in notebooks, with sketches made where necessary. However, a photograph of a bird, especially a rarity, is valuable in that its identity can always be verified. Without the photographic evidence, we bury our mistakes. To quote Mynott (2009: 71), "All birdwatchers have made spectacular mistakes in identification based on misperception or wishful thinking…" A few classic misidentifications by the best of Britain and North American birders, later corrected with the help of photographs, are eye openers (Mynott, 2009). Britain's first record of a long-billed murrelet, also known as marbled murrelet (*Brachyramphus marmoratus*), was originally identified as the little auk (*Alle alle*). The country's first olive tree warbler (*Hippolais olivetorum*), and first black-eared kite (*Milvus migrans*) were also identified from photographs, having been originally misidentified as an olivaceous warbler (*H. pallida*), and a black-kite (*Milvus migrans*), respectively. Over in the USA, the first Eurasian skylark (*Alauda arvensis*) to be recorded in California was misidentified as the state's first Smith's longspur (*Calcarius pictus*).

Back in Singapore, the first ever publicly acknowledged misidentification involved the long-billed plover (*Charadrius placidus*) that was found to be a kentish plover (*C. alexandrnius*), 16 years after its sighting (Konrad, 2005; Leader, 2006). Again, this was possible because, by a rare chance, there was a photograph taken. A more recent case involved the eastern marsh-harrier (*Circus spilonotus*), misidentified as a western marsh-harrier (*Circus aeruginosu*), again through photographic evidence (Tan et al., 2009). Unfortunately, only those with images were acknowledged as misidentified by the BG Records Committee, not so the earlier sightings without images that should naturally also be suspect—a subsequent publication by Lim (2009) accepted them as authentic. And most other rarities in BG's checklist have no photographic evidence, only sketchy notes, sometimes supported by sketches, but such details have never been made public.

Over in Malaysia's Cameron Highlands, the dull race of the blue whistling thrush (*Myophonus caeruleus dicrorhynchus*) has apparently been commonly misidentified as the Malayan whistling thrush (*Myophonus robinsoni*) (D. N. Bakewell, pers. comm.). The distinctive plumage features of the former as highlighted in guide books like Robson (2008) are of little use in the field as the two show similar features, the Malayan being about 15% smaller than the blue (Wells, 2007). This fact burst into the open after images were recently published in a paper on the nesting of the whistling thrush (Teo & Wee, 2009). The absence of images, as in an earlier paper by Salgado (2006), attracted no attention as there were no images of the thrush.

Besides settling controversies on identification, photographs have contributed to a sudden increase in bird behaviour documentation (Cheah & Ng, 2008; Deng et al., 2008; Tsang et al., 2008; Banwell & Lim, 2009; Lim et al., 2009). Currently, birdwatchers are vigilantly observing for anting in the field, now that they have been made aware of the phenomenon (Wee, 2008). Similarly, photographers are on the lookout for pellet casting among non-raptorial birds (Wang et al., 2009). Also, breeding ecology requires more attention because most data on courtship, nest building, clutch size, brooding, etc. are incomplete.

Currently, less than a handful of experienced birdwatchers are taking a camera into the field. The hardcore "twitchers" still believe in their unfailing infallibility at identifying birds. And the Records Committee of the BG has yet to demand an image to support the claim of a rarity sighting, unlike its overseas counterparts where more and more records committees are insisting on images for difficult, rare species. And according to Shaw (2005), the British Birds Rarities Committee does not accept a single-observer record of a species new to Britain without photographic evidence, regardless of the track record of the observer. After all, birding has always been driven by technological innovations and the current availability of cheap and user-friendly digital cameras has already revolutionised birdwatching (Moss, 2005). Local birdwatchers must start embracing technology rather than shun it, least they are left behind.

PUBLISHING BIRD INFORMATION

Field information gathered by citizen scientists is usually recorded in in-house newsletters and recently, in various websites. The former are not always available to researchers when needed as they are privately published. When ornithologist David Wells was writing his monographs on the birds of the region (Wells, 1999, 2007), he had problems

with information from Singapore (Wee & Subaraj, 2009). Information gathered by citizen scientists were then published in the in-house newsletter, Singapore Avifauna and distribution was tightly controlled. To be useful to scientists, such information should be regularly collated and properly published. However, one major problem confronting local birdwatchers is that, not being ornithologists or even biologists, most are unfamiliar with the intricacies of publishing in scientific journals. But if a non-governmental organisations like the NSS need acceptance by the scientific community, it needs to encourage its various special interest groups to engage in scientific publication.

In the 1990s, a few birdwatchers did publish (Lim, 1994; Ho & Supari, 1997; Ng, 1998), even in peer-reviewed journals (Lim, 1991; Rajathurai, 1996, 1997; Ho & Supari, 2000). Unfortunately this was not sustained. However, around mid-2000s publications began to reappear with the BESG taking the lead (Wee & Tang, 2008). This speaks volumes on the importance of the leadership's proactive involvement, not to mention the many aspects of the local avian fauna that are awaiting observation and documentation.

The publication of books also gives credibility to an organization. Unfortunately few are aware that books, more than any other publications, need to be subjected to the rigours of peer-review, especially when published privately. When a manuscript is offered to a reputable publisher, it will normally be sent to one or more competent reviewers. If the publisher is convinced that the book is saleable, it will finance its publication, otherwise the author will have to publish it privately. One major problem with private publications is that standards will be compromised unless manuscripts are sent for proper review.

Two recently published books on the local avifauna come to mind. The annotated checklist of local birds by Wang & Hails (2007) was initially scheduled for publication by the British Ornithological Union. However, owing to funding and other problems it was subsequently published in The Raffles Bulleting of Zoology. And during the process, the same manuscript went through two separate and independent reviews by two ornithologists in each case. Two years later the NSS published the Avifauna of Singapore (Lim, 2009). Both checklists are based on the same set of raw data, yet major discrepancies existed. This can be owed to the NSS failing to appreciate the need for rigorous review.

FUTURE OF BIRDWATCHING

The major player during the last two decades of the 20th century was the BG of the NSS. During this period birdwatchers honed their skills at field identification. The first decade of the 21st century saw the entry of the BESG and bird photographers. These new groups revitalised interest in bird behaviour and in the process saw the return of science to birdwatching. Each of the three groups has its own strength and weakness and working together should see the consolidation of activities that will bring quality to the local birdwatching scene. However, before this can materialise, there is an urgent need for a creditable National Records Committee to document rarities and curate proper records of species sighted. The National Biodiversity Centre (NBC) of the National Parks Board (NParks) is an obvious choice to take the lead. After all, birds are one of the most plentiful, besides being the most visible, active and vocal of the local fauna. And a NBC that is not actively involved in birds cannot really claim to be a national biodiversity organisation. Members of this proposed committee can come from the universities, NParks, Jurong Birdpark, and the NSS.

Admittedly, the current RC has done an excellent job documenting sightings all these years. However, it lacks the full support of all birdwatchers in Singapore. It may have served its purpose during the early years when most of the birdwatchers were from the NSS, but even then not everyone subscribed to it. The privately-circulated *Birdline*, maintained for over two decades now by R. Ollington, and much quoted in Wells (1999, 2007), is a good example of an alternative list. Rajathurai Subaraj, a professional nature guide has his own list. Then there are two publicly available lists that do not see eye to eye (Wang & Hails, 2007; Lim, 2009). Lack of transparency in the deliberations of the NSS's RC has always been a major problem (Tsang et al., 2009). Reasons for acceptance or rejection of submissions have never been made public. Members have always been kept in the dark as to whether it was based on detailed description accompanied by a sketch or a photograph, or simply based on the word of a senior member of the committee. The call of Sreedharan (1996) for stringent rules as far back as the mid-1990s has totally being ignored. Obviously, documentation of local birds is far from perfect. And the changing dynamics of local birdwatching with the entry of the BESG and photographers demands an urgent need to re-examine species documentation on a national level. It is time to have a single credible list.

There should also be close collaboration between citizen scientists and academics as seen in earlier years (Wee & Hale, 2008). Currently, there is a wide gulf between amateur birdwatchers and professional ornithologists, the former believing that their intimate knowledge of the field putting them ahead of the latter. Unfortunately, most birdwatchers being non-biologists, and going alone in technically-inclined activities and projects haves its pitfalls. This became painfully apparent, although not in bird-related activities, when the NSS supported a flawed marine conservation project that it had to publicly disassociate with (Wee & Hale, 2008). Citizen scientists should not feel inadequate when working with ornithologists or even biologists. The latter can always provide expertise such as statistically-sound survey

methods and guidance in scientific publication, especially in the proper reviews of book manuscripts destined for private publication so that the final product is scientifically sound in methodology and content.

Another aspect that has only just been attended to is leadership renewal. The NSS has deemed it necessary to rejuvenate the leadership of the various activity groups by encouraging long-serving leaders to give way to fresh talent. Chairpersons of all special interest groups of the NSS are now limited to a term of three years (Wee & Subaraj, 2009). This is to maintain vibrancy of the groups and ensure a continuous inflow of new ideas. Youthful energy and idealism should be fully tapped and given proper guidance by older and more experienced leaders, not viewed as potential threats. They should be given a chance to lead and not be sidelined. As they are more attuned to the new medium of communication unleashed by the internet, they are able to connect with the younger generation. The influx of young conservationists and nature enthusiasts during the last few years that saw a number of net-based groups blossoming outside the traditional system, bears testimony to this. However, the current President of the NSS has rightly pointed out that most of these younger groups are marine-focused (Kesava, 2008). Because the NSS is visibly weak on marine conservation, young zoology graduate activists naturally filled the vacuum. Not so with terrestrial groups where the NSS's special interest groups have been dominating the scene for a long time. Unfortunately young activists were either absorbed into these terrestrial groups or were left stranded when not given leadership roles.

To meet the challenges of the 21st century, birdwatchers urgently need to be open-minded and embrace new ideas, new technologies, introduce new and imaginative activities, and most important of all, accept younger and more knowledgeable leaders into their midst. This is the only way to ensure that the NSS is accepted as one of the major creditable players in nature conservation and education in Singapore.

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