



BTO

Looking out for birds



TRUSTEES' ANNUAL REPORT
& FINANCIAL STATEMENTS 2018/19

TRUSTEES' ANNUAL REPORT
(INCLUDING THE STRATEGIC REPORT)

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GREY HERON: GAURAV MITTAL / BTO

WELCOME

FROM OUR CHAIR PROFESSOR JENNY GILL

Much of the work of BTO volunteers and staff is concerned with understanding how bird populations can adapt to the changing world around us. Charities like the BTO must also develop and adapt to the changing world, and our vision of enhancing and enriching engagement with birds is a key part of these developments. Building on our strategic vision of 'A world inspired by birds and informed by science', this year has seen investment in a suite of core developments aimed at facilitating wider engagement. Our new website elegantly demonstrates how BTO activities inspire and inform, our online systems for volunteers provide exciting tools for data capture and exploration, and our new membership database is enabling more effective communication with our supporters. Our new governance structures are also now in operation, providing robust guidance and overview of charity affairs and the delivery of our shared vision.



The data generated by BTO volunteers provide unparalleled opportunities to build the independent, impartial evidence needed to inform and guide environmental management and conservation, and to engage across public and policy arenas. This year we commissioned a Science Impact Review, undertaken by an external panel of experts, to identify areas in which our science is used effectively and areas in which we can improve further. The resulting review was extremely positive and will provide an ideal platform from which to strengthen the impact of our work across sectors and society. Engaging with the natural world through BTO surveys is also a highly rewarding and fulfilling experience, and one with which we hope many more will participate in the future.

FROM OUR CEO DR ANDY CLEMENTS

This past year BTO has invested in change to ensure we are fit for the future. Our three high-level aims – to encourage participation, to deliver high quality science, and to inspire people with knowledge – drive us towards a world inspired by birds, informed by science. Crucial back-office investments to manage the new data regulation (GDPR) and to improve our database, have enabled better engagement with our supporters and volunteers. And our communication channels are richer with a new website, and a social media presence that enables stronger engagement with young people. I'm always conscious of the need to look ahead, and last autumn we asked 25 leaders and influencers to come and help us think about BTO's future role in the political environment, the technology sphere and in society. The meeting, BTO Horizons, firmly pointed BTO towards having greater impact.



We want our science to be influential with decision-makers, and have resonance for society. Renewable energy is a policy area where our influence has matured, using knowledge from seabird tracking studies to inform the Department of Business, Energy and Industrial Strategy (BEIS) on resolving issues of the environmental impact of marine renewable energy installations. Wider society is beginning to hear about the extent of invertebrate declines across Europe. Using data from 15,000 children in 500 schools in our What's Under Your Feet partnership project with EDF Energy, we have examined changes in soil invertebrates. Results suggest that summer droughts reduce the availability of invertebrates for birds like thrushes that feed on them. With government departments and school children at different ends of BTO's impact spectrum, we believe we are making a difference for birds.

AT A GLANCE

Between 5,094–5,938 territorial males; the population estimate for Nightingale, made possible thanks to the 1,281 BTO volunteers who participated in the Nightingale Survey.

One special legacy of over **£110,000** came from a dedicated Garden BirdWatcher; she had submitted over **5,000** observations during the course of a decade of participation in this weekly survey.

Thanks to our supporters, members and funders, **£4,612k** was spent during the year on carrying out, supporting and communicating ornithological research.

In 2018/19 **volunteers contributed 1,664,234 hours** to BTO's work, approximately 18,000 hours more than last year thanks mainly to contributions to the new Tawny Owl surveys, the English Winter Bird Survey and increased effort towards the Heronries Census.

We have seen our **voluntary income** grow from £2.5m to £3m, with over a third of this income coming from gifts in Wills alone.

BTO research was presented through 715 radio and television programmes, including BBC Springwatch and the Today Programme, and received 197,000 online and print media mentions.

61 peer-reviewed papers by BTO staff were published in 2018.

In 2018 Scottish volunteers visited and monitored **6,284** Raptor, owl and Raven nest sites and home ranges, providing vital evidence to inform policy and conservation action.



Our 60,000 volunteers monitor change in the environment, delivering the information used to plan and assess conservation action, and informing decision-making processes for the benefits of society, wildlife and the natural world.

RING-NECKED PARAKEET: GAURAV MITTAL / BTO

INSPIRED BY BIRDS

A love of birds is one of core reasons why our volunteers, staff and supporters get so involved in the work of BTO. Through their appearance and behaviour, birds have the power to inspire, something that we have been using to good effect in support of our charitable objectives, as work in 2018/19 demonstrates.

SPREADING THE MESSAGE

The work of the BTO reached a broad audience over the last year, with significant media interest in the amazing stories emerging from our scientific work. The biggest story in the period was the launch of the Tawny Owl Calling Survey, which featured in 371 media articles and 55 radio or television mentions. The latter included BBC Breakfast television and the Today Programme on BBC Radio 4. Press interest around a paper on garden birds, published in partnership with Exeter University, also secured slots on BBC Breakfast and Radio 4.

Social media has continued to be an important channel for engaging audiences with BTO work, much of it supported by stunning imagery. We have been fortunate to have had the generous support of entrants to Bird Photographer of the Year (BPOTY), many of whom have allowed us to use their wonderful images. The presentation of the BPOTY prizes took place at the British BirdWatching Fair in a packed marquee, the event hosted by BTO President Chris Packham. At the end of the year our Twitter following stood at 83,907, Facebook stood at 25,443 and our newly launched Instagram channel at 5,519.

The journeys made by the BTO's satellite-tagged Cuckoos continue to inspire, their journeys viewable 'live' on our website, enabling us to discuss the changing fortunes of migrant birds and the importance of long-term monitoring and targeted research. Our involvement with the Beijing Cuckoo Project, which revealed that Cuckoos from East Asia migrate to Africa via an Indian Ocean crossing, took engagement to new global audiences via mainstream media coverage.



CUCKOO: SARAH KELMAN / BTO

GIVING A HOOT!

The Tawny Owl Calling Survey, which ran over the 2018/19 winter months, attracted impressive levels of participation. Some 131,122 recording periods were submitted, delivering coverage across 11,865 1-km squares and underlining the significant public interest in these birds. The combination of the species involved and the ease of survey participation, supported by a strong media and social media campaign, made this one of BTO's most engaging and impactful single-species studies. The data collected nicely complement the more targeted survey work carried out across a grid of pre-selected survey squares, repeating previous national surveys of the species and providing a measure of changing fortunes.

INSPIRATIONAL STORIES

Birds are amazing and many do amazing things. By using our science in new ways we have been able to craft inspirational stories that resonate with our supporters, our volunteers and the public. Storytelling, the construction of an engaging narrative, is part of this process and something to which we are increasingly turning as we seek to frame our messaging. By weaving together the outputs of different components of our research we are increasingly able to present a more compelling account of our work. Through this approach we hope to increase participation, attract more funding and become even more relevant to our audiences.

“Over the past year we have continued to bring our science and monitoring work to life through engaging narratives, many of which have been supported by stunning imagery. Our supporter magazines, BTO News and Bird Table, continue to inspire and the work done to refresh their approach has been well received.”

Mike Toms, Head of Communications



SPARROWHAWK: GREG COYNE / BTO



DOTTEREL: DAVID TIPLING / BIRDPHOTO.CO.UK

INFORMED BY SCIENCE

BTO combines the skills and passion of birdwatchers with innovative analyses and the latest data-gathering technologies, delivering science that is impartial, impactful and relevant. The evidence base that we provide informs the management of the natural world and supports sound decision-making.

A VITAL ROLE

Many commentators, research studies and reports point to an unprecedented environmental crisis and the associated loss of biodiversity on a global scale. Over coming decades we will continue to face complex challenges resulting from climate change, pressures on land use, pollution and a growing call on the planet's resources. Scientific principles underpin our understanding of these issues and our ability to address them, but in some quarters that science is under attack. Ensuring that society can respond effectively depends on organisations like BTO playing a strong role and making our voices heard. We work with others to inspire society with our knowledge, but, given the magnitude of the current crisis, we need your help to increase the impact of our work.

We have a great reputation for monitoring birds and engaging people in science, generating enviable long-term data sets from the observations of tens of thousands of volunteers. The scientific research and knowledge enabled through this gold-standard approach supports our understanding of the environment, informing a wide range of policy issues and management decisions; these include agri-environment schemes to address biodiversity loss on farmland and wind farm developments to minimise impacts on vulnerable bird populations. In the context of ongoing climatic and land-use changes, uncertain future policies, and issues of societal engagement with science, our distinctive approach delivers multiple benefits.

Over the past year we have:

- continued to collect, curate and share knowledge of long-term population change in birds, adding to over 90 years of records, and millions of observations of all bird species;
- delivered internationally recognised scientific leadership in bird-ringing and other monitoring methods, supporting peer-reviewed scientific papers;
- used our science to inspire the public by unravelling the mysteries of migration in new and accessible ways;
- underpinned the government's contributions to global, European and national conservation treaties and agreements.

However, governments and society often neither fully recognise nor understand the fundamental importance of this scientific knowledge in supporting conservation of the environment. Where there is a lack of understanding, there is a risk of a lack of support and we need to work hard over the coming years to place BTO science squarely in the minds of decision-makers, both here in the UK and more widely.

CASE STUDY: ASSESSING AGRI-ENVIRONMENT SCHEMES

BTO research has played a central role in identifying the nature of farmland bird declines, diagnosing causes, testing solutions and evaluating the success of conservation measures, including agri-environment schemes (AESs). Previous BTO research has informed the design of a range of options in AESs, but more recently we have focused on evaluating how well these schemes actually work. AESs have seen a huge investment of government funds, which are, ultimately, all taxpayers' money. Aside from conservation value, there is therefore a clear public interest in ensuring that they deliver.

Our latest study evaluating AESs, funded by the Welsh Government, focused on Tir Gofal, the first widespread AES in Wales, which ran from 1999 to 2013. We used BTO/JNCC/RSPB Breeding Bird Survey data, as collected by our volunteers in Wales, to test the effects of Tir Gofal options on bird population growth rates, using a method that we had previously applied successfully in England. While not all tests revealed positive effects of the scheme on bird species that might be expected to benefit, 27/98 tests produced positive results and only four produced negative ones. The most beneficial option types considered were those concerning woodland, scrub and hedgerows. Arable and grassland open-field options benefited a few species, but not those that were conservation priorities, with wet grassland and waders being a particular gap. Overall, we found good evidence that Tir Gofal benefited many target bird populations, and therefore key conservation policy targets, but that gaps remain that require new management measures.



SKYLARK: DAVID TIPLING / BIRDPHOTO.CO.UK

INVESTING IN PEOPLE



PARTICIPANTS ON A BTO NEST RECORD TRAINING COURSE: KEITH MINDHAM / BTO

BTO's members, volunteers and staff are the beating heart of our organisation, investing their knowledge, generosity, enthusiasm and expertise in support of our charitable objectives. Last year volunteers contributed in excess of 1,664,234 hours of time to our work, and we have been investing in the tools that support this contribution.

INVESTING IN CORE ARCHITECTURE

How we engage with our supporters, volunteers, partners and customers is fundamental to our ability to deliver on our charitable objectives. Over the last year we have made significant investments in the tools that we use to facilitate this engagement. Central to this has been the migration of our supporter database to CiviCRM and the associated review of accompanying organisational processes. The new system, which provides better management of the information that we hold, will help to deliver a more personalised experience when people interact with us. The system has been deployed in a way that links together securely, personal information, survey participation and training needs, something we are confident will ensure a better experience.

Online communication channels, such as our website and social media feeds, have become incredibly important routes for communicating the results of our scientific work and for engaging new audiences. During the last year, and following extensive research into audience needs, we have restructured our online content and relaunched our website. In addition to a new and more accessible style, we have also delivered better signposting, more engaging content and increased personalisation. The response to the new website has been fantastic and we are well on our way towards our aim for the site to be 'the place' to go for information on Britain and Ireland's birds.

With a combined following of nearly 250,000 across our channels, BTO's social media presence has benefited from the creation of a dedicated Social Media Manager post. The support of BTO's Board and Senior Leadership Team for the creation of the post, reflects their recognition of the rapidly changing ways in which our audiences source the latest news about birds, conservation and science.

IMPROVING SURVEY EXPERIENCES

The past year has seen significant efforts directed towards the online systems used by BTO volunteers to submit, explore and extract their survey data. Many of these developments have focused on the front-end user experience, such as those developments evident for users of BBS Online, WeBS Online and BirdTrack. The provision of download facilities, for example, has been particularly popular with users. Other significant blocks of work are less obvious to users but are just as important; there has been a huge improvement to the BirdTrack verification system, ensuring the best available information is held in our systems, and that those who use our data are confident in its quality.

One of the biggest areas of work over the past year has been with Demography Online, the system used by ringers and nest recorders to collate and store the details of the birds that they ring and the nests they monitor. This work has required more resources to deliver than originally planned, such is the complexity of the information being collected, but the value of these data is such that replacing the previous and ageing system has been an organisational priority. A programme of ongoing work has been scheduled, following on from the roll-out of core functionality that took place last year, to deliver the additional functionality that our volunteers want from this important system.

TRAINING AND MENTORING

Our extraordinary Regional Network volunteers do a great job of encouraging and coordinating local participation in BTO surveys. They are also a highly respected and approachable 'face' for the organisation at a regional level, serving to increase the organisation's

visibility and reach among local communities. We are indebted to members of the Regional Network for all the work they do on our behalf, whilst at the same time recognising that we must do more to support them. One area where we are increasing the support available is for volunteers who deliver, or are interested in delivering, engagement activities. These activities can be specifically designed to build confidence and skills for participation in a particular survey, such as the BTO/JNCC/RSPB Breeding Bird Survey (BBS), or of a more general nature, for example a bird identification walk. Whatever the goal of a particular event, the feedback we receive shows that they are both popular and of immense benefit to BTO.

Training provision is one way we can support those who are willing and able to run such activities. We were fortunate to receive a very generous donation from former BTO member and volunteer Pamela Rhodes, who sadly passed away in June 2019, aged 90. Pamela's gift is facilitating a programme of 'Train the Trainer' events for volunteers at 14 locations around England and Northern Ireland. A grant from the HDH Wills 1965 Charitable Trust allowed us to run a similar programme of events in Wales during 2018/19, with the additional target of upskilling young people to act as BTO Ambassadors. With the help of a Spirit of the Community Awards grant from the Yorkshire & Clydesdale Bank Foundation, BTO Scotland ran two Trainers' Workshops in Stirling and Inverness in spring 2019. These brought together people currently involved in providing training or mentoring with those keen to become involved. The format allowed attendees to share skills and experiences and gain confidence – something we aim to replicate across all our 'Train the Trainer' activities.

SUPPORTING OUR STAFF

To help staff to deliver our priorities we have focused on a number of new initiatives, supporting development, internal communication and culture. Since summer 2018 we have been developing a coaching and mentoring scheme, supported by workshops and enabling individuals to become mentors for colleagues. We have also relaunched our staff forum, a group engaged in ways of improving the working environment – so far this has contributed to connecting staff and Trustees, improving internal communications and developing our approach to health and well-being.

We are very pleased to have joined the Disability Confident scheme this year, as part of an equality and diversity approach to encourage applications for jobs from people currently under-represented in our sector of the NGO movement.



DAVID TIPLING / BTO

MY VOLUNTEER CONTRIBUTION LOUISE BACON

How long have you been involved with the BTO/BTO surveys?

I think I did my first BTO Survey in 1992. As an impoverished student, I saw that there was a Corn Bunting Survey on offer on my doorstep, so no need to travel anywhere. I then decided I liked the sound of the Common Bird Census (CBC) and asked about starting one up, and was put on the BBS pilot, as this was being trialled to replace the CBC. I still do the same BBS square now, and another as well.



Which surveys do you do?

As well as BBS, I am doing additional BBS via the 'Upland Rovers' scheme, and have been a regular participant in many one-off surveys such as Tawny Owl, House Martins, Woodcock, and probably others. My biggest commitment, however, was Bird Atlas 2007–2011, where I surveyed many tetrads in Cambridgeshire summer and winter, and was also the county atlas co-ordinator for the BTO and the county bird club. I am also an active participant in the Nest Record Scheme and a chick ringer.

How would you describe yourself?

I am definitely a birder, and an all-round naturalist. I started birding as a child, and by the time I left the Midlands for East Anglia as a student I was very definitely a birder first and foremost. I am not a lister, very rarely twitch and rarely go out birding in a group. I enjoy a good day out birding, finding my own birds and also visiting the sort of sites other birdwatchers tend not to visit.

What do you get back from participating in BTO surveys?

As the years of contribution have increased, I know that I am contributing a huge amount as a volunteer to vital population monitoring, a task which would be much harder to achieve through paid staff. I think that at the outset I probably saw it as a way of broadening my birding horizons, and learning a bit more about birds, especially in the wider landscape rather than on reserves.

What's been your surveying highlight?

This year's highlight has very definitely been my participation in the 'Upland Rovers', and finding a pair of Greenshank on likely breeding territory, observed in a very light snow shower in early May. I had cycled about 12 miles then walked on a challenging trail from sea-level to 500 m to do the survey in one of the most fabulous NNRs in north-west Scotland.

Has participating changed the way you watch birds?

The one thing which really changed my birding was the Atlas project. Although I knew I was aware of breeding behaviour in birds, and was used to survey work, the whole extra scale of the project, the challenge of finding birds in the somewhat bleak Cambridgeshire farmed landscape and the constant turning up of little oases of diversity was great.

Do you feel that your volunteering makes a difference?

I know that the long-term monitoring provides the evidence to policy-makers and land managers on the status of our bird populations. That's surely enough of a motivation to keep gathering that evidence, so that we can continue to shout loudly for more to be done.

DELIVERING THE EVIDENCE BASE

The abilities to make informed decisions, to measure change and to test conservation solutions, each depend on the presence of robust evidence, rigorous in nature and readily accessible to those who need it. As work carried out in the last year demonstrates, BTO continues to provide robust evidence across a broad range of topics.

SEABIRDS AND MARINE RENEWABLES

Last year, our research staff carried out an important review of the potential for colony-based studies of seabird populations to inform the monitoring of consented offshore wind farm projects. This work, which was funded by the Department for Business, Energy and Industrial Strategy, used data collected through the Seabird Monitoring Programme and the Retrapping Adults for Survival scheme. The review highlighted the potential to both improve the monitoring taking place and the subsequent analysis of the data collected, the BTO authors making a series of 16 recommendations.

The review is part of a wider suite of work carried out during 2018/19 looking at marine renewables. Renewable energy, including that generated by wind, wave and tidal power, is one way to reduce the amount of carbon dioxide that we produce. It helps to minimise the effects of climate change, but many renewable energy technologies could potentially impact waterbird and seabird populations, so we have sought to address these issues through a series of research projects. Papers published during 2018 in this area include work quantifying seabird avoidance of offshore wind turbines, which highlighted some key knowledge gaps and identified opportunities for reducing impacts on birds.

ARTICLE 12 REPORTING

The Birds Directive is one of two Nature Directives used by the European Commission to guide European environmental policy and regulation. A requirement of Article 12 of the Birds Directive is that, every six years, all European Member States must provide detailed information on the population status and range, threats, and conservation of all bird species occurring within their territory.

The latest Article 12 update is due in late 2019. Although the responsibility for reporting falls to JNCC (the UK's key statutory body for nature conservation), almost all of the required data for

birds are held by BTO or derived from our Partnership monitoring schemes. Over the last year, and in support of JNCC, we have drawn on a range of schemes, including the BTO/JNCC/RSPB Breeding Bird Survey (BBS), the BTO/JNCC/RSPB Waterways Breeding Bird Survey (WBBS), the BTO/RSPB/JNCC Wetland Bird Survey (WeBS) and other sources, to calculate and collate information on the population size, population trends, range size and range change for all UK breeding birds, important wintering bird populations and a few passage migrants specified by Article 12. Our staff also contributed to the JNCC-led process to assess threats and pressures facing each bird species, and to collate the relevant conservation measures implemented in the UK.

This work is also essential within the UK, providing the evidence to shape conservation priorities, and many of the results will be subsequently published by us and our partners following the Article 12 reporting process.

INDICATORS OF CHANGE

Our long-term data sets provide evidence of change in the populations of birds breeding and wintering across the United Kingdom. It is vital that this information is made available to those who need it, and it is equally vital that the information is presented in ways that can be readily interpreted by a range of different audiences. Indicators, produced by our staff, provide a mechanism for bringing together information from across suites of species, typically grouped by the habitat they occupy.

'Wild bird indicators' are part of the government's suite of biodiversity indicators and show how the fortunes of bird communities in farmland, woodland, wetlands and waterways, and marine and coastal areas have fared since 1970. The indicators are calculated annually by the BTO, working in partnership with staff at RSPB, for the Department for Environment, Food and Rural Affairs (Defra). The indicators are based almost entirely on data collected by volunteers contributing to national bird monitoring schemes, such as BBS and WeBS, both of which are managed by BTO. An additional indicator, the 'wintering bird indicator', shows how the numbers of wintering waders, wildfowl and other waterbirds using our coasts and wetlands have changed since the 1970s. We also produce indicators at a country level, informing regional policy decisions through data that are geographically relevant.

DELIVERING DATA

Our ambition is to share more of our data, so we were pleased that during 2018/19, we received more data requests. These varied from commercial requests, typically used to assess the implications of potential developments, through to those from students seeking to answer research questions as part of their studies. Formal requests usually relate to accessing raw data, but many more data are made available through summarised outputs or data 'products' like the maps from the BTO Bird Atlases, or the trend graphs from BBS.



LONDON: E A JANES / NATURE PHOTOGRAPHERS LTD



COLLECTING INFORMATION ON RARE BIRDS

Records submitted to BirdTrack (www.birdtrack.net), can be downloaded by local bird recorders, and are a valuable component of the wealth of bird records collated each year. From these records, an annual submission is made by each county to the Rare Breeding Birds Panel (RBBP), providing important information on the breeding status of around 85 rare breeding birds, and a small number of non-native breeding species. BirdTrack records, with breeding evidence and precise locational information, make an important contribution to the work of RBBP, which monitors the fortunes of rare breeding birds.

CORNCRAKE: DAVID TIPLING / BIRDPHOTO.CO.UK

INFORMING POLICY DECISIONS



BUZZARD: DAVID TIPLING / BIRDPHOTO.CO.UK

The next few years will see major changes in conservation, land management and agriculture. It is important that we engage with these changes and look for new opportunities to demonstrate the value of our long-term data sets and impartial expertise, bringing the evidence forward to inform policy and land management decisions.

PLANNING FOR THE FUTURE

Increasing pressures on land, such as those emerging from a growing demand for housing, require a coordinated policy response, and one that is informed by evidence. Understanding the likely impacts of policy decisions on wildlife and habitats, for example, requires detailed information on the distribution and abundance of species, and on how these are shaped by external factors. Our data sets continue to deliver the evidence being used to inform policy decisions at the scale of both local planning developments and more broadly.

Our work on bats has, for example, highlighted the potential impacts of county council housing plans for 12 bat species. It has identified how the negative effect of planned housing could be nearly halved by preferentially building on less preferred habitats and in areas with low populations of urban-sensitive bat species. Work carried out in 2018, building on the methods developed for the Norfolk Bat Survey, has provided baseline information on bat populations living within the North York Moors National Park, providing the National Park Authority with the data needed to inform future land management decisions.



FARMLAND BIODIVERSITY

Delivering a wildlife-rich environment, whilst also maintaining production, is something of a holy grail for agriculture. Following earlier theoretical development, the same international consortium – involving BTO and partner organisations – tested whether the value of farmland for wildlife might be increased simply by changing the

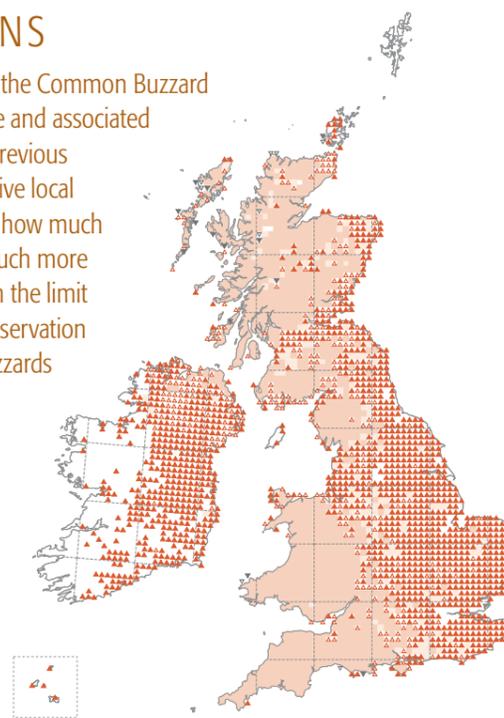
spatial arrangement of crops. Different crop plants provide different resources, so more changes of crop within an area would move more types of resource closer to an average location within that area; the whole area would then also support more wildlife. This could be done by increasing the number of crops (composition) or the size and arrangement of crop areas (configuration). Field research on birds, bees, hoverflies, spiders, ground beetles and plants, as well as on the crop pollination ‘ecosystem service’, was undertaken in multiple 1 km ‘landscapes’ in East Anglia, together with regions in France, Spain, Germany and Canada.

The results indicate that the diversity (richness) of all taxa increases as crop diversity increases and average field size decreases. Configuration and composition had much stronger positive effects on species diversity than semi-natural habitat cover, but effects of crop diversity and mean field size depended upon semi-natural habitat: decreasing field size had a stronger effect in landscapes with little semi-natural habitat, whereas increasing crop diversity showed the opposite pattern. Smaller fields were also associated with improved pollination of experimental radish plants.

This study provides the first large-scale, multi-taxa, cross-regional evidence that manipulating crop heterogeneity could benefit both biodiversity and farm economics, without taking land out of agricultural production. This work, which was funded by Defra in the UK, by BiodivERsA in continental Europe and by the Natural Sciences and Engineering Research Council of Canada, could be critical as agricultural policy in the UK is revised after Brexit.

CASE STUDY: BUZZARD POPULATIONS

Our data show that, over the last 40 years, the Common Buzzard population has undergone a rapid increase and associated range expansion, more than doubling its previous range size (see map). Despite some intensive local studies, there is still little understanding of how much further Buzzards could spread and how much more populations could increase until they reach the limit supported by their local environment. Conservation and management decisions relating to Buzzards need to take account of these changes; also needed is a robust measure of local carrying capacities. In 2018, we used data from the BTO/JNCC/RSPB Breeding Bird Survey to assess the potential for further range expansion and to forecast potential densities. The resulting report, commissioned by Natural England, will be used to inform future conservation and management decisions.



WILDLIFE MANAGEMENT

BTO’s impartial, evidence-based position enables us to inform key decisions about the conservation and management of bird populations. Sometimes these decisions relate to areas or topics where the interests of different stakeholders may be at odds with one another, leading to strongly-worded debate and, occasionally, legal challenge.

Game management and raptor persecution are two areas where our data have been used to inform debate and to support legal process. The prosecution of a Norfolk gamekeeper, found guilty of two charges relating to the killing of 10 Buzzards and a Sparrowhawk, and possession of pesticides and other items capable of being used to prepare poison baits, was aided by data collected through BirdTrack. A key part of the case for the defence was the idea that the number of dead Buzzards found was too high to have been achieved through illegal poisoning in one area and that the carcasses must therefore have been ‘planted’ on the defendant. Counts of Buzzards in north Norfolk from the same time period as the crimes took place were extracted from BirdTrack, providing clear evidence to refute the claim being made by the defence.

Work carried out in 2018/19 by Henrietta Pringle and other BTO colleagues, and funded by Mark Constantine, has investigated the potential impacts of Pheasant and Red-legged Partridge releases on populations of the generalist predators that may either predate gamebirds or scavenge their corpses. This work, which found positive associations between large-scale gamebird release and predator populations, informs the debate about the wider impacts of game management. It is also of relevance to those tackling the declines in breeding waders, where research demonstrates that increased predation pressure (from generalist predators) may be contributing to the declines. Funding permitting, we believe we could make a significant contribution to this debate in future, by informing the policy decisions that determine how wildlife and gamebird populations might best be managed.

EUROPEAN POLICY AND HUNTING

Article 7 of the European Union’s Directive on the conservation of wild birds allows for the hunting of certain species, where such hunting does not jeopardise conservation efforts. Article 7 clarifies that species should not be hunted during their reproductive period or, if the species are migratory, during their pre-nuptial migration. To ensure effective implementation of these requirements, the European Commission requires Member States to identify the extent of the reproductive period and, where applicable, the timing of pre-nuptial migration for species included on Annex II.

Periodic review, essential given the changing climate, uses the best available information on breeding and migration to determine these periods when hunting should not take place. During 2018, we carried out the most recent of these reviews, collating information from various sources, including that from a set of core BTO surveys, such as WeBS, the Nest Record Scheme and BirdTrack. This highlighted some significant changes to the information previously available.



GARGANEY: CHRIS KNIGHTS / BTO

BUZZARD MAP FROM BIRD ATLAS 2007-11, WHICH WAS A JOINT PROJECT BETWEEN BTO, BIRDWATCH IRELAND AND THE SCOTTISH ORNITHOLOGISTS’ CLUB

WORKING ACROSS TAXA

A CORE CONTRIBUTION

Many people interested in birds and birdwatching are also interested in other wildlife, and we recognise the contribution that our volunteers can make to our knowledge of habitats and wildlife beyond birds. Our expertise in working with, and supporting volunteers, delivers valuable monitoring outputs across a broad range of other taxa, from deer and butterflies through to bats (see page 18) and bush-crickets. 2018 was the 10th year of the Wider Countryside Butterfly Survey (WCBS). Over the past decade a total of 1,840 WCBS squares have been surveyed, 1,007 by Butterfly Conservation volunteers and 833 by participants in the BTO/JNCC/RSPB Breeding Bird Survey. Altogether, 16,618 visits have been made by approximately 1,700 recorders, who counted 959,847 butterflies of 51 species. The top five most widespread species over the past decade have been Meadow Brown (found in 87% of sampled squares), Large White (85%), Small White (84%), Green-veined White (78%) and Small Tortoiseshell (75%). These data contribute to an integrated approach for monitoring butterflies through the UK Butterfly Monitoring Scheme.

MONITORING NON-NATIVE SPECIES

Non-native species are regarded as one of the largest threats to biodiversity worldwide. There are more than 3,000 non-native species in the UK, and the rate of establishment is increasing every decade. To assess and manage the potential threats posed by these species, we need reliable information on their numbers and knowledge of where they occur, together with rigorous assessment of their impact. We make a major contribution to tracking the arrival, spread and establishment of non-natives through our core monitoring schemes and, in partnership, through the GB Non-Native Species Information Portal's alert system and by supplying data to National Biodiversity Network (NBN). A suite of investigations to test for the influence of increased numbers of non-native species (including Ring-necked Parakeet and American Mink) on native biota was initiated through our partnership with JNCC and working with the Centre for Ecology and Hydrology. A BTO study, published in 2018, investigated whether it is possible to predict which non-native species are likely to become established in the UK based on the climate in their native range. Such knowledge can be used to inform and support early preventative action, where required.

TRACKING THE IMPACTS OF DISEASE

Through Garden Wildlife Health, we have been monitoring the health of the wildlife using the UK's gardens for more than a decade. The scheme, which is based around an online platform built by BTO, delivers both a framework for systematic surveillance via BTO Garden BirdWatch participants and the architecture for opportunistic reporting by members of the public. Garden Wildlife Health also acts as a portal for the dissemination of support and advice for the public. Two important scientific papers were published in 2018, the first reviewing current disease risks and identifying future research needs and the second presenting new information on two diseases associated with leg lesions in British finch populations. The value of Garden Wildlife Health comes from the relatively small annual financial cost, which unlocks the much larger citizen science participant audience to deliver a network capable of identifying emerging diseases and their impact. This capacity and capability to rapidly detect, identify and track disease outbreaks provides a crucial early warning system to safeguard the health of birds, other wildlife and people. Garden Wildlife Health is a collaborative project with the Zoological Society of London, Froglife and the RSPB.



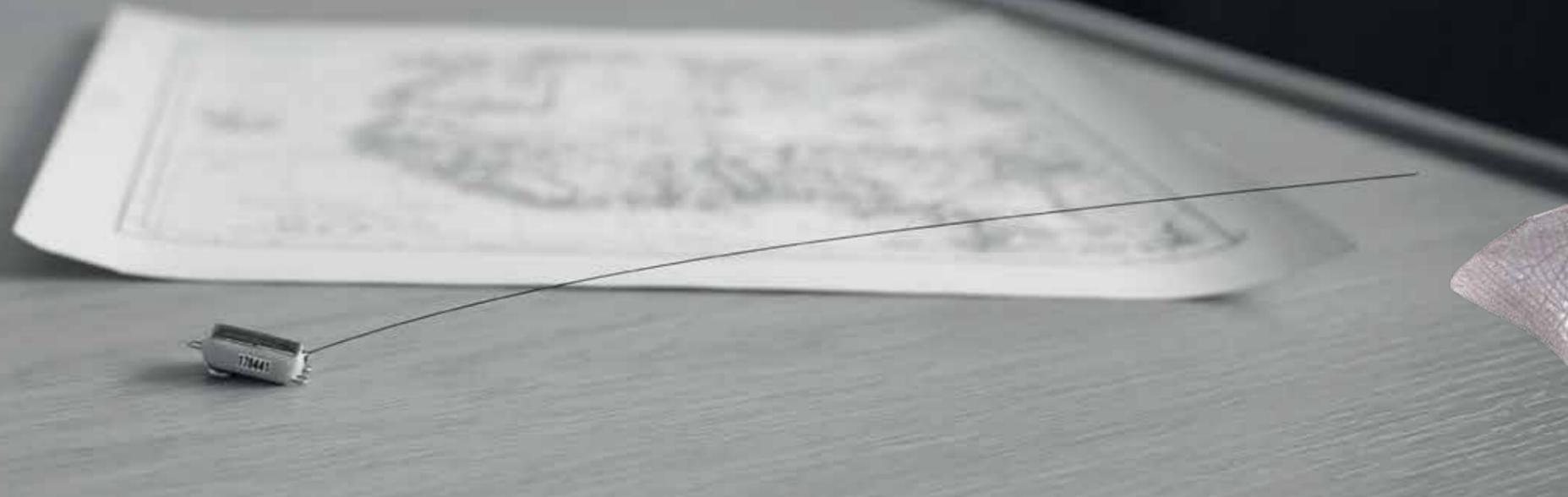
MOUNTAIN HARE: FERGUS GILL / NATUREPL.COM, SMALL HEATH: MIKETOMS, CANADA GOOSE: JOHN HARDING, GREAT TIT: JOHN HARDING



MONITORING MAMMALS

Mammals are an important part of the UK's biodiversity. While some species are difficult to monitor and require special surveys to determine their distribution, others can be monitored on an annual basis as part of bird surveys. Volunteer birdwatchers taking part in the BTO/JNCC/RSPB Breeding Bird Survey have been recording sightings of mammals, as well as birds, since 1995 on randomly selected 1-km squares throughout the UK. In 2018, the presence of mammals was recorded in 88% of the 4,022 squares surveyed. While trend information is reported for nine mammal species annually, the data have also been used to produce much-needed abundance maps, highlighting important areas for species such as Mountain Hare. This approach has also enabled our researchers to identify areas where such species show significant changes in their abundance, which can help direct targeted research and inform management decisions.

DRIVING INNOVATION



Technological innovation is an important component of the BTO's strategy, influencing both the ways in which we carry out our research and in which we run our business. Three areas of innovation where BTO has been particularly active over the past year are tracking technology, acoustic monitoring and computing power.

KEEPING TRACK

We continue to use a range of tracking devices to chart the movements of birds, both within the breeding season and more widely across their annual cycle. The use of the latest Platform Terminal Transmitter (PTT) tags, linked to the ARGOS satellite-based system, has enabled birds weighing as little as 100 g to be tagged with devices that can reveal the location of the bird without it needing to be recaptured. Such devices have been deployed by our staff on male Cuckoos migrating between Britain and Africa. Smaller species, including Nightjar, are being fitted with GPS tags.

We have used GPS tags to examine the movements of Nightjars breeding in Thetford Forest and at Dersingham Bog National Nature Reserve. The GPS tags record hundreds of precise locations at five minute intervals over many nights, providing the most detailed information on foraging movements and habitat use ever obtained for the species, and derived from the tracking of over 50 different individuals. The information generated demonstrates the importance of specific foraging habitats and their proximity to nest sites. These results will greatly improve our understanding of Nightjar habitat requirements and inform management and conservation efforts in heathlands and plantation forests.

Some of the Nightjars have also been tracked across their autumn migration, the birds taking around 6 to 8 weeks to reach their wintering sites, which are occupied from November through to March. The wintering locations obtained from the GPS tags confirm that the main wintering area is located in the scrub-dominated grasslands to the south of the equatorial rainforests, primarily within the Democratic Republic of Congo. As with other species, knowing the location of wintering grounds and the routes used to reach them is an essential part of the conservation jigsaw.

Working with the Universities of East Anglia, Lisbon and Porto, BTO is a partner in Movetech Telemetry (movetech-telemetry.com), an academic partnership that has been developing and producing lightweight tracking devices for the study of animal movements. Movetech Telemetry devices have been used in a number of BTO projects, and are also sold commercially to other researchers. During the past year, the Movetech Telemetry team has been developing a new and innovative tag, which has been designed to increase our understanding of Golden Eagle movements and behaviour, for example by identifying whether a bird is feeding or resting. Most importantly, the tag will provide an instant fix on any birds which die, allowing researchers to better determine the causes of observed mortality. A pilot study is currently underway in Scotland, funded by Scottish Natural Heritage.

COMPUTING OPPORTUNITIES

Recent innovation within computing and web-based systems has enabled us to do more with the very large data sets that we hold on birds and other wildlife. Through a partnership with NERC, our researchers have had access to super-computing capabilities, facilitating the speed at which analyses can be carried out on large data sets. Many of the analyses run over hours, sometimes days, so being able to speed up this process has been incredibly beneficial to the researchers carrying out the work.

Development of the EuroBirdPortal (eurobirdportal.org) website, carried out in the last year, has delivered 'live' animated maps of bird migration at a continental scale, visualising migration in a highly engaging manner. BTO has been heavily involved in this development work, underlining the technological capabilities of our Information Services Team and its staff.

CASE STUDY: ACOUSTIC MONITORING

The ability to identify and monitor birds, bats and other wildlife (such as bush-crickets) by the sounds that they make has opened up new opportunities for our researchers. Acoustic monitoring, typically using passive recording technologies, has led to key pieces of BTO work over the past year. This work has continued to grow in its importance, and it is likely to be an area of strong focus for the future.

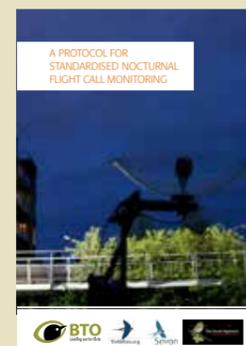


MIKE TOMS / BTO

NOCTURNAL MIGRATION

As a presentation at our 2018 Annual Conference showed, BTO staff have been using sound recording technology to examine the extent and pattern of nocturnal bird movements. This is an area of growing interest within the ornithological community, with individuals investing in recording equipment to document the birds heard overflying their gardens at night. If this information can be collected in a systematic manner by enough people, then it has the potential to shed new light on the timing of the movements made by nocturnally-migrating birds, like Redwing, Whimbrel and Golden Plover.

BTO staff Simon Gillings and Nick Moran, working in partnership with colleagues at Sound Approach and Sovon, have produced a *Protocol for Standardised Nocturnal Flight Call Monitoring*. The protocol aims to highlight simple ways that recordings and the data extracted from them can be standardised, whilst still allowing flexibility for local circumstances. Coupled with developments to the Trektellen website and the launch of web pages to bring together useful resources (nocmig.com), we hope that the growing community of enthusiastic 'nocmig-ers' can be supported, so that more effort can be directed towards the study of nocturnal migration.



Acoustic recording of birds may also be used to monitor difficult to study species, such as Long-eared Owl, Spotted Crake and Nightjar. The opportunity for using full spectrum bat detectors to monitor nocturnally vocal birds like owls and Nightjar is being investigated by the BTO's Stuart Newson (see 'An ear for bats'), while John Calladine, based at BTO Scotland, has been investigating the possibilities for monitoring breeding Long-eared Owls using passive recorders.

BRANDT'S BAT: HUGH CLARK / NATURE PHOTOGRAPHERS LTD

AN EAR FOR BATS

There is growing use of full-spectrum bat detectors to survey bats and other taxa; however, because of their cost these tools have tended only to be available to professional consultants. The development of a 'citizen science' approach by the BTO's Stuart Newson, enabling volunteers to book out detectors from libraries and other regional centres, has revolutionised our ability to monitor bats at much wider spatial scales than has been possible before. BTO was able to support Stuart's interest in the opportunities for acoustic monitoring of bats through a Fellowship, made possible thanks to a generous legacy from long serving BTO member, Maxwell Hoggett. With several peer-reviewed papers already published, and others in the pipeline, this is now an area where BTO has considerable expertise. Stuart's contribution was recognised when he received the Marsh Christian Trust Award for Innovative Ornithology 2018. His expertise, which has grown from the Norfolk Bat Survey that he launched in 2013, has supported new initiatives in Scotland and, most recently in the North York Moors National Park HLF-funded Landscape Partnership Scheme. Stuart now sits on Natural England's Bat Expert Panel, contributing to discussions on national monitoring of these understudied species. This work provides a great example of how knowledge gained from work on birds can be transferred to the study of other taxa.



EMPOWERING COMMUNITIES

Through its Regional Network and its effective partnerships, BTO has been able to support, encourage and empower individuals, communities and other organisations. By taking a leading role within our wider community, we have again demonstrated an ability to deliver on our charitable objectives.

POWERFUL PARTNERSHIPS

Successful partnerships lie at the heart of our work; these are best demonstrated by the relationships that we have with JNCC and other partners for delivery of the core monitoring of the UK's bird populations. It is through these relationships that many of our longest-running surveys are delivered, providing vital evidence of change and enabling research that seeks to identify the reasons for observed species declines.

In addition to the reporting of annual survey results, 2018/19 also saw several significant publications that would not have been possible without the partnership approach to core data collection. These included work on the potential establishment of non-native bird species, the impacts of climate change, and the challenges and opportunities of open data.

Work to increase the amount of support that BTO gives to its Regional Network – which is made up of volunteers who look after our supporters and survey volunteers at a local level – and to the wider network of local bird clubs and bird observatories, continued throughout 2018/19. Among other things, BTO support includes partnership working to deliver events and one-day conferences to increase local engagement, the provision of data for county bird reports, the provision of BTO speakers for evening talks and the delivery of tools to enable and support data collection and curation.

During the last year BTO has also been working with a diverse mix of local groups, including on Curlew (see opposite) and other breeding wader species. Some of this work has involved partnerships with large landowners and their staff, through which it has been possible to engage new audiences in data collection. Work carried out in partnership with the Yorkshire Dales National Park Authority has, for example, explored the ways in which local stakeholders can contribute to national monitoring (Wilson *et al.*, 2018).



COMMON FROG: MIKE TOMS / BTO

TRANSFERRING KNOWLEDGE

BTO is fortunate in having such a long and well-respected history, leading in the application of citizen science approaches to long-term monitoring and data collection, curation and analysis. Thanks to funding in 2018/19 from the Esmée Fairbairn Foundation, we have been able to support a number of other organisations, including Amphibian & Reptile Conservation and ORCA, through the sharing of our expertise and knowledge. By working in this way we can help our partners, and the other organisations working within our sector, to deliver the evidence base needed to document change in their taxa of interest. It is also through such partnerships that information concerning different taxa can be brought together for analysis – such as our recent and ongoing work on climate change effects across different trophic levels.

BUILDING CAPACITY

The ability to deliver robust monitoring frameworks relies heavily on the networks of volunteers willing to carry out fieldwork. While many parts of the UK have large numbers of volunteers available, there are regions where it can be difficult to find people to take on survey squares. Often this is simply a case of survey sites being in remote or hard to get to locations. Building volunteer capacity in these areas is a priority and significant efforts were made over the last year to plug some of the gaps. 2018/19 saw university groups at Cardiff University and the Penryn campus of Exeter University taking on count sections for the BTO/RSPB/JNCC Wetland Bird Survey (WeBS), and a team from the RAF Ornithological Society (RAFOS) carry out WeBS counts in remote areas of north-west Scotland and complete special expeditions for the current Seabird Census. More widely, 2018/19 saw the very successful Tawny Owl Calling Survey attract a host of new survey volunteers, many of whom it is hoped will go on to participate in future BTO initiatives.

NURTURING NEW LEADERSHIP

During 2018/19, BTO staff continued to contribute to Cambridge University's MPhil course in Conservation Leadership. This full-time course is aimed at graduates of leadership potential with at least three to five years of relevant experience. Students are drawn from across the world, with the majority coming from existing roles within conservation organisations located in Africa, Asia, North and South America and Australasia.

This Cambridge University course is delivered in partnership with the Cambridge Conservation Initiative, of which BTO is a part. With a focus on the issues and challenges of leadership and management, and the opportunity to draw upon the expertise of the organisations that make up the Cambridge Conservation Initiative, the course delivers interdisciplinary education in conservation leadership that is unique and world-class.

CASE STUDY: WORKING TOGETHER FOR WADERS

Our work supporting local volunteer groups and engaging a diverse range of stakeholders in monitoring breeding waders showcases the power of working in partnership for the benefit of biodiversity conservation. Developing a shared understanding of the problems facing our breeding waders will be key to implementing effective conservation solutions for these iconic birds. Our important role in partnership-working reflects our well-respected position as an organisation delivering impartial scientific evidence. We have put this into practice by engaging stakeholders in monitoring waders in the Yorkshire Dales and Cairngorms National Park, and providing scientific guidance for groups developing local wader monitoring programmes. Working in collaboration with Sovon, we led a review of the effectiveness of management interventions for grassland breeding waders, providing positive evidence about what works for a BirdLife International multi-species action plan for wader conservation. Thanks to funding from the Esmée Fairbairn Foundation, we have been able to collate evidence on the monitoring approaches of local Curlew projects across the UK. Our aim is to grow this into a community hub for collating and disseminating information on the local causes of population change for breeding waders, and the efficacy of conservation solutions. Sharing information on what works, where and why, will encourage cooperation and learning across these local communities; this will serve to maximise the success of conservation actions for breeding waders, and will empower local stakeholders to be the facilitators of positive change in their communities.



CURLEW: DAVID TIPLING / BIRDPHOTO.CO.UK

REVIEWING OUR SCIENCE

A CORE CONTRIBUTION

BTO has a strong reputation for delivering quality science, but it is important that we continue to monitor our processes and identify those aspects of our work that could be done better to deliver greater impact. As part of a wider programme of work aimed at securing our resilience for the future, an independent panel has reviewed the impact of our science. Led by Professor Rosie Hails (Director of Nature & Science at The National Trust), with Dr Mike Morecroft (Principal Specialist for Climate Change at Natural England), Professor Chris Thomas FRS (Director of the transdisciplinary Leverhulme Centre for Anthropocene Biodiversity at the University of York) and Professor Andrew Watkinson (Professor of Environmental Sciences at UEA and a non-executive director of the Centre for Environment, Fisheries and Aquaculture Science), the panel concluded that BTO has had a remarkable impact on policy and practice, given its size and resources.

The panel recognised the rigour of our science, which includes the integration of our monitoring schemes with research, and our publication record; some 388 scientific papers were published from 2012–2018, including in the highest ranking academic journals. Our impartial evidence has informed some key policy areas, such as assessing the impact of marine renewables upon birds, understanding declines in farmland bird populations and informing the debate about upland land management. We have delivered high impact science to inform the design of agri-environment schemes, tracked migrants to diagnose their causes of decline and documented the impacts of climate change on UK biodiversity and globally.

More broadly, the panel highlighted the leadership role that we play in the sector, recognising the good relationships that we have with conservation NGOs, government agencies and academia, and the value of our long-standing partnership with JNCC. BTO plays an important role in inspiring people about science, whilst our volunteers are central to the monitoring and research that we undertake through the scientifically robust approaches that maximise the value of such citizen science data. Our staff and volunteers are dedicated to making a difference through the dissemination of knowledge, and we tell some great stories.

The panel made some very helpful recommendations, emphasising the need to continually adjust our mode of communication for maximum impact, and for different audiences. In particular, they noted that major changes in conservation and environmental policy are likely in the future, such as around the 25 year Environment Plan for England, and the Well-being of Future Generations Act of the Welsh Government. They recommended that we should actively promote our science to policy-makers to ensure that our data sets can inform, monitor and evaluate the impact of these policies. We will increasingly need to work in partnership to deliver wider impact and to spread our research into new areas such as in education (building on the successful 'What's Under Your Feet?' project), health and well-being, and in the urban environment. There are exciting opportunities to utilise technological development to engage volunteers in new ways, as shown by the Norfolk Bat Survey, and to communicate our results.



WHAT'S UNDER YOUR FEET: FAYE VOGELY / BTO



ENGLAND

Although much BTO work takes place at larger spatial scales, some of our work is directed to addressing topics and evidence needs of a more regional nature. As the following pages demonstrate, during the last year we have been working across different countries to provide much-needed information.

EVALUATING AGRI-ENVIRONMENT SCHEMES

During the 2018/19 winter, some 1,300 volunteers made winter visits to 1,500 Breeding Bird Survey squares across England, squares that are normally only monitored during the breeding season. The purpose of these winter visits was to investigate how wintering birds – together with Brown Hare – benefit from using agri-environment scheme (AES) options in winter. This is something that remains a major gap in our knowledge, hence the need for this English Winter Bird Survey and the accompanying support for this work from Natural England and the Department for Environment, Food and Rural Affairs (Defra). This work will complement existing studies that have successfully evaluated the effects of AES options on farmland birds and will further our understanding of why the majority of breeding farmland birds are still in decline.



REED BUNTING: DAVID TIPLING / BIRDPHOTO.CO.UK

COUNTING NIGHTINGALES

Large-scale population estimates of species are used for several reasons, including the assessment and protection of important sites. However, determining a national population requires extensive surveying and the use of methods that allow counts from surveyed sites to be scaled up across a larger area. One important piece of BTO work in this area, reported on in 2018, concerned the Nightingale, red-listed on the UK Birds of Conservation Concern. In addition to delivering important information on population size, the work also looked at different methods for estimating the population.

Nightingales have declined by 61% in the last 25 years and identifying which sites contain the largest populations is vital. The study focused on 2,733 2 x 2 km squares; 2,356 where Nightingales were known to be, as well as randomly-chosen squares whose selection was stratified based on habitat suitability. By using different analytical methods, the final population was estimated to be between 5,094 and 5,938 territorial males, of which only 55–65% were counted during the surveys.

The study highlighted the importance of Lodge Hill, a Site of Special Scientific Interest for breeding Nightingales, which was subsequently designated for its nationally important population of the species, based on the results presented in this paper. This site has been in the news because of planned housing developments, so the information on the size and importance of the Nightingale population here is of particular significance. This study would not have been possible without the 1,281 BTO volunteers who visited squares to survey Nightingales or the funding received from Anglian Water, with additional funds from donations by BTO members and supporters and the Nightingale Supporters Group. We are also very grateful for the awards made to the survey by 14 charitable grant-making trusts (including the Chapman Charitable Trust, the William Haddon Charitable Trust, the Mercers' Charitable Foundation, the Michael Marks Charitable Trust and the Jack Patston Charitable Trust).



NIGHTINGALE: DAVID TIPLING / BIRDPHOTO.CO.UK

ACCESSING NEW AUDIENCES

The Brecks form a unique area of inland East Anglia, straddling the counties of Norfolk and Suffolk. Recognised as one of the most important parts of the United Kingdom in terms of biodiversity, they encompass tracts of forest, heathland and arable farmland, threaded by river corridors. Well established as a popular destination for birdwatchers, botanists and other naturalists, the area is home to some of Britain's rarest and most sought-after species. The Brecks are also popular with visitors as a holiday destination or, increasingly, as a place to set up home.

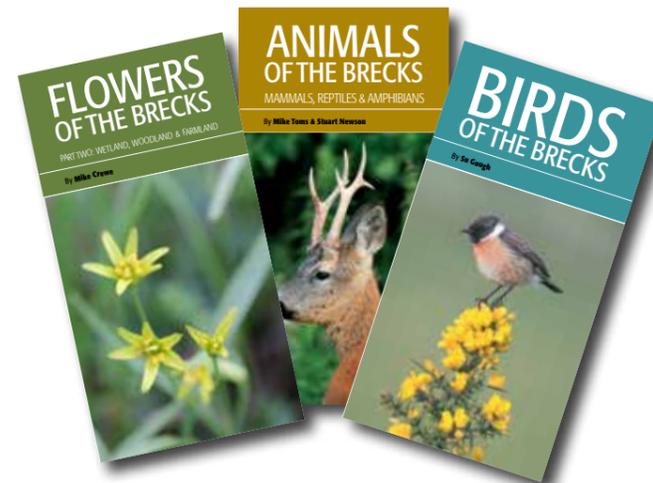
Recognising the need to engage more people with the wildlife of the Brecks, and with the role that citizen science plays in delivering monitoring, BTO has been working with the Breckland Society, Norfolk Biodiversity Information Service, Suffolk Naturalists' Society, and the Norfolk & Norwich Naturalists' Society to provide accessible materials that deliver an affordable and informative introduction to the area's wildlife. This has been achieved through a series of guides, the first four of which were published in 2018. These make use of BTO data and expertise to support material written by local authors. It is hoped that this approach may be adopted more widely for other important areas within the region.



CORNWALL EVENT: SIMON TAYLOR / BTO

A NETWORK OF OPPORTUNITY

The Regional Network team in Cornwall has created an enthusiastic community of members and volunteers over the last couple of years. The small team, led by Simon Taylor, have worked closely together to give regular and interesting feedback through newsletters, and via social media on surveys and events in the region. They have also delivered an excellent one-day conference at Duchy College, training days and even offered social evenings and boat trips! Coverage of the Breeding Bird Survey and Heronries Census has increased, and participation in the Tawny Owl surveys was amongst the highest in Britain. Key to their success has been communication, between themselves as a local team, and with their BTO community.



WALES

Based in Bangor, north Wales, the BTO Cymru office continues to provide a focus for a range of important projects, relevant not only to conservation, policy and land management decisions within Wales but also more broadly. 2018–19 has seen work within the Environment & Rural Affairs Monitoring and Modelling Programme.



MIKETOMS / BTO

THE SCIENCE POLICY INTERFACE

The devolved environmental responsibilities of the Welsh Government are structured by two pieces of legislation (the Environment Act and the Well-being of Future Generations Act), together reshaping biodiversity and environment policy, as well as the civil agencies involved. BTO Cymru is already recognised as a source of robust data, scientific expertise and an objective standpoint, but we are working hard to broaden our integration, particularly with the precepts of the Well-being of Future Generations Act. As an organisation with a long-term and engaged volunteer base, we continue to discuss collaborative proposals in social research, for example with NHS Wales on the long-term health and well-being benefits of outdoor activity, and with university social science researchers on the influence of information and education in mitigating human-wildlife conflict around coastal urban breeding gulls. These research ideas are potentially very influential but are somewhat outside BTO's historical expertise and we are therefore taking time to develop them and to find financial support.

We are a key partner in the large consortium of organisations that delivers the Environment & Rural Affairs Monitoring and Modelling Programme (ERAMMP). We lead on the bird component, providing data and analytical expertise as well as running professional survey programmes to evaluate the effects of management. In 2018/19 we participated in predictive-modelling work around post-Brexit scenarios for the Welsh landscape, and began planning for field surveys in spring 2020.

The coastal species with historical priority has been Chough – these birds often breed in coastal caves and feed on grassland invertebrates in the coastal zone – but we also raised awareness of a wider suite of species and projects, such as local seabird monitoring groups, the BTO Heronries Census and the JNCC-led Seabird Monitoring Programme.

ENGAGEMENT DAYS

Volunteer/member engagement days were held across Wales, part of a rolling programme that moves venues between years to increase our reach. Events were held in Clwyd East, Caernarfonshire, Montgomeryshire, and Carmarthenshire. As noted above, Curlew conservation is high on the Welsh agenda and two events were held in partnership with BASC, one in north Wales and another in mid Wales, further broadening the audiences reached.

HABITAT USE OF BREEDING CURLEW

Curlew continued to be BTO Cymru's high-profile species throughout 2018/19. The year began with BTO/Natural Resources Wales (NRW) funded tracking work in two landscapes; upland marginal farmland (where the majority of Welsh Curlew are now found) and a lowland wet grassland site on Anglesey, more representative of historic Curlew breeding range. Welsh Curlew have declined by 63% since 1995, and the tracked cohort of nine birds indicated the poor breeding success driving this decline; with upland birds losing breeding attempts to predators while lowland nests were lost to mowing.

Increasing recognition of our work led to BTO staff speaking on BBC Radio Wales, participating in arts-science events in Pontio Bangor, and attending briefing meetings with Countryside Alliance, NRW, RSPB, Mark Isherwood AM and the Welsh Environment Minister. Initial habitat and spatial scale results from the pilot study were fed into policy briefings, and a suite of Curlew proposals prepared for NRW in response to these discussions was funded late in the year. Year-end found the team planning for a very busy 2019 tracking season, but also bringing together several BTO data sets (Atlas, CBC/BBS, BirdTrack) in a novel analysis predicting spatial and population changes in Curlew. This work included modelling the likely time to extinction as a breeding species and the provision of underpinning information; the latter will be used to set the species' relative importance in the developing Area Statement regions, which will drive future environmental action across Wales.

FISH-EATING BIRDS

Our independent, data-driven scientific standpoint was recognised by NRW when they invited our participation in the Welsh Fish-eating Birds Advisory Group, convened by NRW to explore and develop ideas for monitoring and conflict-resolution between river management, fisheries and fish conservation, and fish-eating birds (notably Cormorant, Goosander and Red-breasted Merganser).

Our population and spatial monitoring data helped the group to refine the species of interest (excluding Merganser for the moment) and considering bird ecology and conservation in equality with the declining salmonids. We presented our work comparing licence returns with professional survey data on a Welsh river, and advised on a redesign of data-capture around licence applications and licence monitoring for the use of 'lethal methods as an adjunct to scaring' at fisheries, which is intended to improve data quality.



GOOSANDERS: DAVID TIPLING / BIRDPHOTO.CO.UK

SCOTLAND

To ensure that BTO is effective in Scotland, we need a Scottish base. The Scottish Government and other organisations look to us for relevant evidence to support their needs. A Scottish office helps us to reach out and get people counting and is essential for carrying out research that is appropriate for Scotland.

MONITORING RAPTOR POPULATIONS

Our support of the Scottish Raptor Monitoring Scheme continued through 2018/19, with the testing of a new online system for data entry and the establishment of a framework for sharing data and knowledge across the country. The scheme has now been in operation for 17 years and provides many examples of how nationwide monitoring programmes for raptors and other scarce bird species could be developed. A review of the scheme was published in a special issue of the journal *Bird Study*, presenting valuable information on survey coverage and the trends of raptor species in Scotland. Some 6,284 bird of prey territories were checked through the scheme in 2018, representing a significant effort by very dedicated volunteers. The information collected continues to inform conservation and land management policy in Scotland.



WHITE-TAILED SEA EAGLE: DAVID TIPLING / BIRDPHOTO.CO.UK

IMPROVING SURVEY COVERAGE

The UK's uplands support important populations of breeding waders, raptors and songbirds. An improved understanding of population change among these species would be of great value, providing a robust evidence base for work on land use and climate change, and for informing policy and conservation management decisions.

Survey squares in remote areas typically receive fewer visits than those in more populous or lower-lying areas. To improve coverage we have trialled the 'Upland Rovers' scheme, through which volunteers can undertake one-off visits to a selection of the more remote BTO/JNCC/RSPB Breeding Bird Survey (BBS) squares. This continuing supplement to BBS increased Scottish coverage to nearly 600 squares in 2018 (up from 383 in 2012), meaning that our ability to deliver key information on Scotland's breeding birds has been further increased.

A paper was published on population trends in European mountain birds. This was a European collaboration, using data from BBS, augmented by bespoke mountain surveys organised by BTO Scotland, notably 'Project Ptarmigan' and 'What's Up'. Both surveys sought to improve survey coverage in upland areas.



HUGH TOOBY / BTO

UNDERPINNING POLICY

Researchers in our Scottish office continued to carry out important work to support and inform policy decisions. Two pieces of research carried out in 2018 provide good examples of the nature and breadth of this work.

BTO Scotland staff carried out a review for Scottish Natural Heritage (SNH) of the evidence base supporting current listings of species on General Licences. These licences, which are issued by SNH and the other Country Agencies, are used to prevent agricultural damage and to protect public health and safety where there's unlikely to be any conservation impact. Information on the current status of birds listed on the general licences is needed to inform whether or not a species should appear on the General Licence.

Our staff have also been developing sensitivity mapping approaches for Forestry Scotland. This work has involved the assessment of the potential opportunities and threats to different bird species associated with forest expansion. The resulting information is being used to inform the nature and location of planned forest expansion, thus ensuring that the impacts on (or opportunities for) particular birds are taken into account, and that decisions are taken using the best available evidence.

COMMUNITIES AND NETWORKS

In collaboration with the Cairngorms National Park Authority, we have worked with staff of the East Cairngorms Moorland Partnership estates to survey and monitor nests of Cairngorm breeding waders, further testing the efficacy of engaging with local stakeholders. This work has built on a successful pilot study carried out in the Yorkshire Dales in 2017. Our impartial, evidence-based approach has helped to support such collaborations, something well illustrated by the role that we are playing within the Working for Waders initiative.

We held a stimulating and well-attended 'Enhancing bird monitoring networks in Scotland' meeting, to explore options for increasing the number and diversity of training and engagement opportunities throughout the country, something that parallels our wider training activities, both here and more widely. Our staff continue to work closely with others in our sector to increase the numbers of people participating in birdwatching and monitoring activities. Community engagement, and work to increase the networks available to support volunteers, have been a key focus over the past year as we work towards our aim of increasing participation within Scotland.

TACKLING SKUA DECLINE

The Arctic Skua is thought to be the most rapidly declining seabird species in the UK, its breeding populations largely confined to Shetland and Orkney. As part of our ongoing research into the reasons behind the rapid population decline, a second cohort of birds was tagged on Fair Isle and at a new study site in Orkney in 2018. The selection of these sites allows us to assess differences in foraging behaviour between two colonies with contrasting breeding success, something that may be contributing to the changing fortunes.

Four geolocator tags deployed in 2017 were recovered from Fair Isle, providing much-needed information on the skuas' movements throughout the year – the species is migratory, so the reasons for its decline may lie elsewhere in the world. The work on Arctic Skuas has been funded through donations from individual supporters, some of whom have been to Fair Isle to see the work taking place. Our aim is to develop a Species Action Plan, bringing together experts on Arctic Skuas from across their range, to identify solutions and help to reverse the decline in populations of this striking seabird.



ARCTIC SKUA: DAVID TIPLING / BIRDPHOTO.CO.UK

NORTHERN IRELAND

We are particularly active in Northern Ireland and have a fantastic partnership with the Department of Agriculture, Environment and Rural Affairs (DAERA) and the Northern Ireland Environment Agency (NIEA), through which we have been able to increase the community involved in collecting much-needed information on the country's birds.

NORTHERN IRELAND'S SEABIRDS

Northern Ireland holds important breeding colonies of a number of seabird species; monitoring data for these colonies are needed to support international reporting obligations and to inform policy decisions. Since 2013, NIEA funding has enabled us to facilitate an increase in annual seabird monitoring across Northern Ireland. Working closely with JNCC, local volunteers and other NGOs, we have continued to coordinate monitoring efforts and deliver an annual report – The Northern Ireland Seabird Report. The 2018 report was launched at an evening event that attracted 42 seabird network volunteers and other stakeholders, underlining the expanding interest in this important work.



BLACK GUILLEMOTS: DAVID TIPLING / BIRDPHOTO.CO.UK

BREEDING WADERS

In the late 1980s, a series of surveys discovered that lowland damp grassland was a particularly important habitat for Northern Ireland's breeding waders, supporting over half the total estimated population. The lowland grassland sites visited in the original survey had not been specifically revisited for breeding waders since, so the launch in 2018 of the Northern Ireland Lowland Breeding Wader Survey provides a much-needed update on how these populations have fared. The information collected by our volunteers will enable the NIEA to better target management strategies, including breeding wader agri-environment scheme options, and conservation designation of sites of particular importance. This work, which is continuing into 2019/20, has been supported by the delivery of a dedicated training event, held in County Londonderry in March, which attracted 60 participants and was a great success.



REDSHANK: LES FOSTER / BTO

GROWING ENGAGEMENT

In partnership with North Down Borough Council and the National Trust, we have been working to increase public engagement with Northern Ireland's seabirds. Thanks to funding from NIEA and the NGO Challenge Fund, we have been able to install remote cameras on Cockle Island, which hosts a breeding population of 150–200 Arctic Terns and 400 pairs of Black-headed Gulls. Footage from the cameras is transmitted to the Cockle Island Seabird Centre, enabling visitors to get a sense of the breeding colony and individual nesting attempts.

Seven volunteer training events were delivered during 2018, the training supporting volunteers participating in the BTO/JNCC/RSPB Breeding Bird Survey (BBS), the Nest Record Scheme and, as mentioned above, the Lowland Breeding Wader Survey. Training and mentoring are important components within the wider programme of support provided to our volunteers. Although the BTO Northern Ireland team is small, it is taking on an increasing amount of work, also reflecting the growing networks of volunteers. Much of our success in Northern Ireland has been thanks to our long-standing Northern Ireland Officer, Shane Wolsey, and his efforts to increase the numbers of volunteers participating in survey and monitoring work. His dedication, like that of our other staff, reflects the wider passion and dedication of the volunteers alongside whom we work. The passion of both staff and volunteers was particularly evident at the Northern Ireland Birdwatchers Conference at Oxford Island, which attracted 155 attendees.

SUPPORT FOR THE FUTURE

The value of our role in supporting evidence-based decision making within the province was underlined by a successful application to DAERA's Environment Fund Strategic Strand. This funding will help to cover the costs of posts based at the Northern Ireland office, additionally providing financial support for the ongoing Northern Ireland Lowland Breeding Wader Survey and continued professional coverage of 52 BBS squares.

Other work being delivered by the posts includes that on agri-environment schemes, on the effects of disturbance on wintering waterfowl, and analytical work on changes in breeding bird populations. Recommendations provided to the Centre for Ecology and Hydrology by BTO researchers have been included in the agri-environment scheme monitoring framework guidance document produced for DAERA. This provides valuable evidence on scheme options, so that these can work more effectively to deliver desired conservation outcomes alongside productive farming.

URBAN GULLS

The increase in urban breeding populations of Lesser Black-backed Gulls and Herring Gulls has been evident across many areas, both within Northern Ireland and more broadly. Understanding the size of these populations, their location and their foraging behaviour has been the focus of an exciting new project in Belfast.

The project has used a number of different approaches to collect information, from vantage point surveys of urban-nesting gulls in Belfast city centre – conducted from Ireland's two tallest buildings – through to tagging and tracking work. Four breeding Lesser Black-backed Gulls were fitted with GPS tracking devices in 2018, with a further two Lesser Black-backed Gulls and four Herring Gulls tagged in 2019. The data collected from these birds will reveal how urban-nesting gulls in Belfast use their habitat, identifying the resources that exploit and the sites that they use.

Discovering where the gulls forage has the potential to help mitigate future human-gull conflicts, such as those associated with the spread of bacteria and anti-microbial resistance in the environment. Urban gulls get a bad press, but these two species appear on the Birds of Conservation Concern Red- (Herring Gull) and Amber- (Lesser Black-backed Gull) lists, underlining the need for impartial evidence and the identification of appropriate conservation and management solutions.



ARCTIC TERN: MARK R TAYLOR / BTO

WORKING ACROSS THE WORLD

Migrant birds do not respect political boundaries, with many species undertaking vast journeys that see them cross countries, oceans and continents. If we want to understand why the populations of migrant birds change then we need to collect information on their journeys, and work with colleagues in other countries to address key questions.

CHARTING JOURNEYS AND IDENTIFYING KEY SITES

As described elsewhere in this report, we have been using new technologies to track the movements of birds as they undertake their annual migrations. Our highest profile tracking project has been that following male Cuckoos, migrating between Britain and Africa, but this is just one of a number of species whose journeys have been a focus for our work over the last year. We know, from this work, that West and Central Africa are important for many of our summer migrants, and we have also identified key sites around the Mediterranean which are used as refuelling stops by migrating birds. Such knowledge not only enables us to direct research towards what is happening in these locations, but it also supports those seeking to protect the sites used by migrating birds.

Our attention hasn't just been focused towards the south; work in Scotland on Short-eared Owls has revealed the nomadic nature of these birds, with some individuals moving between Scotland and Norway within the same breeding season. Both of these areas of work benefit from the collaborations we have developed with colleagues in other countries – we are, after all, working on the same populations, just at different points in their annual cycle.

BUILDING CAPACITY AND SHARING EXPERTISE

When working in other countries, one of our aims has always been to support local ornithology and develop capacity. Working with the A P Leventis Ornithological Institute (APLORI) in Nigeria – the only institute in West Africa focusing on ornithology – and the University of Cape Coast in Ghana, we have delivered a new academic course, developing promising students to Master's degree level. BTO staff teach on the undergraduate module and supervise two Master's students each year. The students are offered the opportunity to undertake the BSc in Applied Ecology and Ornithology at APLORI, returning to Cape Coast where they carry out a research project, which BTO helps supervise.



MARK HULME / BTO



CUCKOO: DAVID TIPLING / BIRDPHOTO.CO.UK

THE CUCKOO TRACKING PROJECT

BTO has been tracking Cuckoos since 2011; with your continued support we are building a valuable body of knowledge, knowledge that will help address the decline of this iconic summer visitor. We are extremely grateful to each and every one of our Cuckoo supporters who have donated. Without such support, we simply could not continue with this project.

BEING FIT FOR THE FUTURE

We continue to benefit from the Heritage Lottery funded organisational review completed in 2017/18 and will be implementing more of the recommendations over the coming year. The process has given us greater clarity about our purpose and direction of travel, putting us in a much better position for planning for our next strategy period.

A PROGRAMME OF DEVELOPMENTS

At the start of this new period a number of significant initiatives are coming to fruition. Building on the foundational work we did through our organisational review, we have recently launched our new website which articulates much more clearly our vision and purpose. The same review work helped us secure significant core funding from the Esmée Fairbairn Foundation which over the coming years will bring our strategic objectives within reach.

Our three organisational goals are:

1. Enable more people to learn and grow through participation in environmental discovery;
2. Deliver impartial and impactful science;
3. Inspire and empower people with an understanding of birds and the importance of knowledge.

The Esmée Fairbairn funding is already catalysing faster progress on our communications and engagement programmes through BirdTrack, BirdTrends and BirdFacts, supporting BTO input to the future development of national Seabird monitoring, allowing BTO to provide greater support to the wider sector through partnerships and supporting the development of our highly innovative work in acoustic monitoring. Delivering on this programme of developments will be a priority for the organisation.

Informing responses to large-scale population declines in breeding waders and long-distance migrants will be a significant focus of our science over the next 3-5 years. Alarming declines of species like Curlew, Lapwing and Redshank, identified by BTO monitoring, have captured the public imagination. We are now uniquely placed to inform and evaluate responses to conservation solutions. We will also continue with urgent work to diagnose causes of decline in species like Swift, Nightingale, House Martin, Spotted Flycatcher and Cuckoo, to inform action that could change their fortunes.

In the coming period we expect to reap considerable benefits from the investment we have made in a new Customer Relationship Management Database. We can finally realise our aspirations for our engagement with members, volunteers, funders and others to be supported by communications which are relevant and personalised. We expect to undertake a major refresh of our Garden Birdwatch scheme in a way which enables a broader constituency to engage with our work.

Building on feedback received as part of our science impact review, we will explore how BTO can most effectively inform policy and practice, with the aim of enhancing the impact of BTO's activities.

We have invested considerable resource in our people over the past year, with a dedicated HR Manager now looking after our staff. Over the next period we expect to improve support for staff further with a specialist HR system and increased HR staffing. We are also making changes in the way we are governed with two new committees creating the time for focus on important issues in the Finance and Risk area and the Governance and Nominations area. Our ambition is to achieve more diversity in our Board and we have recently completed our first open recruitment process for new trustees.

Growing and adapting our work and relevance in a changing world will remain vital. We will therefore start to plan for a review of the BTO Strategy, which comes to an end in 2020, to ensure that we remain fit for purpose into the next decade and beyond.

These priorities bring together the unique elements of BTO – the volunteers who provide the data from which we build world-class science, and we are committed to improving the communication of our knowledge for the benefit of wider society.



CURLEW: DAVID TIPLING, BTO STAFF AND VOLUNTEERS: BTO, SPOTTED FLYCATCHER: EDMUND FELLOWES



KEITH MINDEN / BTO

THANK YOU FOR YOUR SUPPORT

BTO is extremely grateful to our members and supporters for the amazing contribution they have made to ensuring we can continue our work. 2018/19 was another remarkable year for us, and here are just a few highlights of the great things we have achieved together, with your support.

BUILDING SUPPORT TOGETHER

Thanks to the generosity of BTO members and supporters alike, we have seen our voluntary income grow from £2.5m to £3m, with over a third of this income coming from gifts in Wills alone. One special legacy of over £110,000 came from a dedicated Garden BirdWatcher; she had submitted over 5,000 observations during the course of a decade of participation in this weekly survey. This generous gift means that her contribution to science will live on through the robust evidence we will continue to provide to help safeguard birds, both within our gardens and beyond the garden gate.

A MATTER OF TRUSTS

The support of charitable trusts is equally valuable, contributing £240,147 to our income over the past year. 42 charitable trusts generously supported our work with donations and grants, ranging from £50 to £100,000. These contributions have assisted in a number of ways, including through our core monitoring schemes, migration research, Curlew conservation and people engagement programmes.

MAKING A DIFFERENCE

Our Arctic Skua research programme, directed by researchers at our Scottish office, has been wholly funded by just under 100 generous donors. To date, more than £150,000 has been raised and what we have discovered has been ground-breaking. We now know so much more about these threatened seabirds, including where they feed, their migration routes and where they spend the winter. None of this would have happened without funding the financial support of a small number of committed individuals determined to deliver positive change for these amazing seabirds.

FOR MORE INFORMATION ON HOW TO SUPPORT OUR WORK PLEASE CONTACT: FUNDRAISING@BTO.ORG OR CALL 01842 750 050.

AWARDS CEREMONY SUCCESS

Over 200 invited guests joined BTO staff to celebrate the annual BTO/Marsh Awards and Dilys Breese Medal Award during an evening reception at The Mall Galleries, London. The awards were held against the stunning backdrop of the Society of Wildlife Artists (SWLA) Natural Eye Exhibition, where BTO supporters came together to celebrate the amazing achievements of the six award winners. The awards are supported by the Marsh Christian Trust, and a list of past award winners can be found on our website.

The SWLA donates 5% of the proceeds from the artwork sold during the reception to BTO. We are very grateful to SWLA President, Harriet Mead, and the SWLA and Mall Galleries for hosting us, and for their generosity in allowing us to use their wonderful venue.

Our wider partnership with the SWLA has continued, building on the very successful Flight Lines project, that has brought SWLA member artists, BTO staff and volunteers together to tell the stories of migrant birds and the research being done to halt their decline.

WATERBORNE BENEFITS

Anglian Water has been a loyal BTO partner over many years, supporting a range of projects, particularly those relating to Nightingales. Anglian Water's new Flourishing Environment Fund, administered by the Cambridge Community Foundation, granted us £10,000 to restore and enhance an area of wetland on our Nunnery Lakes Reserve. Working with professional contractors and local volunteers we have created new habitats for birds, amphibians and fish. Views have been opened up over the newly-restored wetland and lakes by a 360-degree viewing platform. This was enabled by grants from the Postcode Local Trust and Thetford Town Council. This work improves the reserve for wildlife, enriches the experience of visitors and acts as a flood prevention measure for the town where we are based.

SECURE OUR FUTURE

Autumn 2018 saw the launch of one of our most successful appeals, Secure our Future. With the uncertainty of the UK's political and economic climate, it was, and still is, more important than ever for BTO to secure its place in delivering critical and unique research to policy and decision makers at the highest levels. Thanks to our donors, we can forge new relationships and seek ever more effective ways to ensure our evidence is available to policy-makers and decisions-takers during these challenging times.

As part of the Secure our Future campaign, a special group of BTO friends, 'the Witherby Custodians' came together to show their support. In 2018/2019, 26 supporters became Witherby Custodians, raising over £38,000 for BTO and providing great feedback about our work. We have already had one gathering of the Custodians, and are looking forward to the insight they will bring at future meetings.

"Being able to show our supporters BTO science in action greatly adds to their understanding; they can see the difference their support is making."

Susan Hughes, Head of Fundraising



SAWBLADE NIGHTJAR / HARRIET MEAD SWLA



KEITH MINDEN / BTO

OUR SUPPORTERS

We are very grateful for the generous support that we have received, both in time and money, in the past year. In addition to members and other fieldworkers, there are many other individuals and companies who support the work of BTO with financial contributions. The Trust is particularly pleased to acknowledge the following corporate and other supporters.

CORPORATE SUPPORTERS 2018/19

Anglia Sports & Schoolwear Limited, Anglian Water, Ark Wildlife, R & E Bamford Limited, Big Domain, Biotrack Ltd, Bird Brain UK Limited, Birding in Portugal, Birdguides, Brinvale Bird Foods, Canon Garth Ltd, Carl Zeiss Limited, CJ Wildbird Foods, Eddowes Aviation Safety Ltd, EDF Energy, Evergreen Insurance Services, From the Notebook, Gardenature, Gardman Ltd., Grant Arms Hotel, Holiday Cottages.co.uk, Jacobi Jayne & Co Limited, John E Haith Ltd, Natureguides, Naturetrek, Northumbrian Water, Opticon, Outdoor Alternative, Parkhill Nurseries & Garden Centre Limited, Paso Primero, Serenata Flowers.com Limited, Shadwell Estate Co. Ltd., Stay in Cornwall, Swallowtail Print, Swarovski UK Limited, Syngenta UK Limited, Thames Water Utilities Limited, The Nestbox Company, Thetford Garden Centre, The Original Cottage Company Ltd, The Travel Chapter Ltd

TRUSTS 2018/19

A G Leventis Foundation, Aberbrothock Skea Trust, The Barnes Conservation and Philanthropy Trust, The Brendonridge Trust, The British Birds Charitable Trust, E G & M A Bousfield Charitable Trust, The Burton Foundation Trust, The Leslie Mary Carter Charitable Trust, Chadwyck-Healey Charitable Settlement, The Dovehouse Trust, Downton Banister Trust, The Dulverton Trust, The Edinburgh Trust, Esmée Fairbairn Foundation, Harris Charitable Trust, Horace & Helen Gillman Trusts, The Lady Hind Trust, The Lawson Trust, The Lizandy Charitable Trust, John Swire 1989 Charitable Trust, Keith Ewart Charitable Trust, The Mitchell Trust, The Jack Patston Charitable Trust, Postcode Local Trust, Mr & Mrs Philip Rackham Charitable Trust, Rowan Bentall Charitable Trust, The John & Pamela Salter Charitable Trust, Sandra Charitable Trust, The Saxham Trust, The Tobit Trust, The Torrs Charitable Trust, Udimore Charitable Trust, The Geoffrey Watling Charity, The Emily Weircroft Charitable Trust, The Whaites Charitable Fund, Whitaker Charitable Trust, The Maldwyn Williams Charitable Trust, The J & J R Wilson Trust, Yorkshire & Clydesdale Bank Foundation

LEGACIES 2018/19

Kathleen Helen Bagen, Audrey Mary Butler, John Arthur Cook, Howard Lloyd Davies, John Paul Gibbons, Anthony Gibbs, Barbara Hackney, David George Lloyd, David Martin-Jenkins, Averil Doreen Jones, Laurence Martin, George Bryan Patrick & Evelyn Patrick, Phyllis Susan Peters, Trevor Poyser, Sarah Elizabeth Rowlands, Charles Edward Victor Saxton, Douglas John Stevenson, Gillian Marjorie Stewart, Frank Tait, David Bryan Thomas, Susie Diana Ullman, John Webber, Bay White, Joan Young, Stuart Frank Young, Arthur Ernest John Youngs, George Zachariah

IN MEMORIAM 2018/19

Gerald Behrens, Gary Caine, Anthony John Capstick, Margaret Elliott, Giles Forrest, Anthony Gibbs, Hubert Haunschmidt, Anne Lawson, Joan Lewis, Roy Ernest Manton, Joyce Martin, Brian Mellers, Mary Mourin, Jack Leroy Park, Maurice Peall, David Porteous, Daphne Pritchard, Bryan Leonard Sage, David Alasdair Tindal, Dr Edward James Williams, Steve Willing, Jeffrey Charles Witts, Graham Wren

FUNDERS OF BTO WORK 2018/19

Agri-Food and Biosciences Inisstitute (AFBI), Anglian Water Group, APEM Ltd., BAE Systems, Bat Conservation Trust, Bookend Trust, British Dragonfly Society, Bureau Waadenburg bv, Butterfly Conservation, Cairngorm National Park, Cambridge Conservation Initiative, Catalan Ornithological Institute, CEFAS, Centre for Ecology & Hydrology, Danny Alder Ecology & Conservation, Department of the Environment, Food and Rural Affairs, Department for Business, Energy and Industrial Strategy, Devon Wildlife Trust, DONG Energy, Eneco – Netherlands, Environment Resources Management, EURING, European Commission, Forest Sciences Centre of Catalonia, Forestry Commission, Forestry Commission England, Forestry Commission Scotland, Foster & Partners, Galloper Wind Farm Ltd., Game & Wildlife Conservation Trust, Go Ape, Hartley Anderson Ltd., Heather Trust, Institute of Avian Research, James Hutton Institute, Joint Nature Conservation Committee (on behalf of the statutory nature conservation agencies: Natural England, Natural Resources Wales, Scottish Natural Heritage and the Department of the Environment Northern Ireland), MAKE Architects, Moors for the Future, National Trust, Natural England, Natural Resources Wales, Natural Environment Research Council, Newcastle University, NIRAS Consulting Ltd., North York Moors National Park Authority, Northern Ireland Environment Agency, Northern Ireland Raptor Study Group, Peter Morgan, Renewables Grid Initiative, Royal Society for the Protection of Birds, Scottish Government, Scottish Natural Heritage, Scottish Raptor Study Group, Scottish Ornithologists' Club, Sound Approach, Stichting Rubicon, State of Delaware (DNREC), Thetford Town Council, Trunk Road Agency, University of Cambridge, University of East Anglia, University of Edinburgh, University of Exeter, University College London, University of Stirling, University of York, Welsh Government, Wildfowl & Wetlands Trust, WOOD Environment & Infrastructure Solutions UK Ltd., Yorkshire Dales National Park Authority, Zoological Society of London.



Peer-review is an important process, establishing the validity of research through review by other expert researchers in the field. It also provides valuable feedback, so that researchers can revise and improve their papers before publication. BTO reports annually across a number of indicators relating to the scientific work that it carries out; three of these relate to scientific publications, reflecting the quality of the publications being produced, their impact and the degree to which the work has been delivered through collaboration.

During 2018 our staff produced 61 peer-reviewed papers, of which 54 were in ISI-listed journals and 22 were published in high impact publications (with an Impact Factor of 3.5 greater). 18 of the publications were BTO-led (first or last author) multi-organisational papers, underlining the collaborative nature of our work.



At 353, the altmetric score for the paper by Lawson et al. (2018), published in Philosophical Transactions of the Royal Society, is in the top 5% of all research outputs scored by Altmetric. Altmetric provides an overview of who is talking about this research, and where. The impact factor for this journal in 2018 was 6.139.

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FINANCIAL OVERVIEW

This year for the first time ever we received legacy income of over £1million, a wonderful testament to the generosity of members and supporters and their belief in our vision. Together with other donations and grants, voluntary income formed 47% of total group income. We aim to raise this to over 50% in the medium term. Somewhat against the trend there was a significant increase in income from publicly funded contracts, and this compensated for lower than expected consultancy work and the loss of our main commercial sponsor Gardman due to it going into administration following a major warehouse fire. Whilst we will continue to take advantage of any available public funding for work that is aligned with our strategy we remain committed to securing an increased sustainable level of income from appropriate commercial trading activities.

The principal sources of funds continued to be contract research, membership subscriptions, individual donations and legacies. A total of £4,612k was spent during the year on carrying out, supporting and communicating ornithological research. Total income increased by 12% to £6,440k while total expenditure increased by 8% to £6,336k, giving a surplus before investment gains of £104k. After investment gains of £34k and an actuarial loss of £62k on the defined benefit pension scheme the net movement in funds was £76k positive.

While the impact of the defined benefit pension scheme deficit on the balance sheet remains significant this represents a very long term liability which the trustees are managing on a sustainable long term basis. The Board has an unrestricted free reserves target range of 9 to 12 weeks' operating expenditure. These reserves are held against any unexpected falls in income or other unforeseen circumstances. Unrestricted funds excluding tangible fixed assets and the defined benefit pension liability at 31 March 2019 totalled £1,206k (2018: £911k), equivalent to 10 weeks' expenditure (2018: 8 weeks'). These are summarised accounts. To gain a full understanding of the financial affairs of the Trust please refer to the Annual Report and Accounts published on the BTO website or request a printed copy from the Director of Finance & Services, BTO, The Nunnery, Thetford, Norfolk IP24 2PU.

The Annual Report and Accounts were approved by the Board on 30 July 2019 and will be submitted to the Registrar of Companies, the Charity Commission and the Office of the Scottish Charity Regulator. The accounts include the auditor's report which is unqualified and does not contain a statement either under section 498(2) of the Companies Act 2006 (accounting records or returns inadequate or accounts not agreeing with the records and returns) or section 498(3) (failure to obtain information and explanations). Further information is given in the accounting policies of the full accounts.

SUMMARISED ACCOUNTS: 2018/19

| | £'000 | £'000 |
|--|----------------|----------------|
| | 2018/19 | 2017/18 |
| INCOME | | |
| Donations and legacies | 3,004 | 2,518 |
| Charitable activities | 2,417 | 2,092 |
| Other trading activities | 1,018 | 1,130 |
| Investments | 1 | 1 |
| Total income & endowments | 6,440 | 5,741 |
| EXPENDITURE | 2018/19 | 2017/18 |
| Raising funds | 1,483 | 1,302 |
| Charitable activities | 4,612 | 4,497 |
| Other – defined benefit pension scheme | 241 | 93 |
| Total expenditure | 6,336 | 5,892 |
| Net income / (expenditure) | 104 | -151 |
| Net gains on investments | 34 | 2 |
| Other recognised gains/(losses) | -62 | 581 |
| Net movement in funds | 76 | 432 |
| Total funds brought forward | 69 | -363 |
| Total funds carried forward | 145 | 69 |
| REPRESENTED BY | 2018/19 | 2017/18 |
| Fixed assets | 2,295 | 2,551 |
| Net current assets | 1,609 | 1,068 |
| Creditors over 1 year | -77 | ,46 |
| Pension fund liability | -3,682 | -3,504 |
| | 145 | 69 |

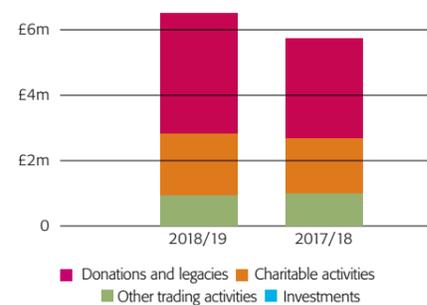
Note: the 2017/18 figures are restated

INDEPENDENT AUDITOR'S STATEMENT TO THE MEMBERS OF THE BRITISH TRUST FOR ORNITHOLOGY

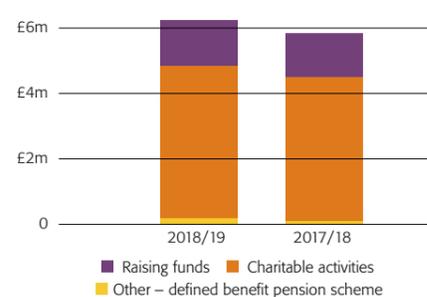
We have examined the summarised financial statements for the year ended 31 March 2019 set out above. In our opinion the summarised financial statements are consistent with the full annual financial statements on which we have reported an unqualified opinion.

Ensors Accountants LLP, Statutory Auditors, Cardinal House, 46 St Nicholas Street, Ipswich IP1 1TT 14 August 2019

INCOME



EXPENDITURE



**The British Trust for Ornithology
Trustees' Annual Report (incorporating the Strategic Report)
For the Year Ended 31 March 2019**

For the purposes of Section 162 of the Charities Act 2011 and the Directors' Report for the purposes of Section 415 of the Companies Act 2006.

| | |
|---------------------|---|
| Company number: | 357284 (England and Wales) |
| Charity number: | 216652 (England and Wales) SC039193 (Scotland) |
| Registered Office: | The Nunnery, Thetford, Norfolk IP24 2PU |
| Principal Advisers: | |
| Statutory Auditors | Ensors Accountants LLP, Cardinal House, 46 St Nicholas Street, Ipswich, Suffolk IP1 1TT |
| Principal Bankers | National Westminster Bank plc, 7 Cornhill, Bury St Edmunds, Suffolk IP33 1BQ The Royal Bank of Scotland plc, 2 Blenheim Place, Edinburgh EH7 5JH |
| Solicitors | Browne Jacobson LLP, Castle Meadow Road, Nottingham NG2 1BJ |
| Pensions Advisers | Russell Ulyatt Financial Services Ltd, 1 The Triangle, ng2 Business Park, Nottingham NG2 1AE |
| Investment Advisers | Russell Ulyatt Financial Services Ltd, 1 The Triangle, ng2 Business Park, Nottingham NG2 1AE |
| Insurance Brokers | Uttings Insurance Brokers, 16 The Fairland, Hingham, Norwich, Norfolk NR9 4HN |

The members of the Board are the directors of the charitable company and the trustees for the purpose of charity law. Those serving during the period were as follows:

| | |
|---|-----------------|
| Dr I P Bainbridge | Mr D Jardine |
| Dr F Barclay | Mr I Packer |
| Professor S Bearhop (to 31 December 2018) | Dr D M Parker |
| Lt Col R C Dickey | Dr D J Reynolds |
| Professor J A Gill | Mr N A Sherwin |
| Dr S Hunter | Mrs J Spencer |
| Ms F M Hurst | |

Structure, Governance and Management

Governing Document

The British Trust for Ornithology (known generally as the BTO) is a company limited by guarantee governed by its Memorandum and Articles of Association. It is registered as a charity with the Charity Commission and the Office of the Scottish Charity Regulator. Membership is open to any person whose application is approved by the Board upon payment of the requisite subscription. Members undertake to contribute up to £1 each in the event of an insolvent winding up.

Trustees

Trustees are nominated by the Board or members and elected by the members at the Annual General Meeting in December each year, to serve from the following 1 January. The normal term of office is four years, with a limit of two consecutive terms. New trustees receive a comprehensive information pack and undergo an induction day at The Nunnery to brief them on the BTO and their role as company directors and trustees.

Organisation and Key Management Remuneration

The Board of Trustees is the governing body of the BTO. It meets four times a year. The Board is supported by the Finance & Risk Committee, Governance & Nominations Committee, Regional Network Committee and Ringing Committee. The day-to-day management of the BTO is delegated to the Senior Leadership Team, led by the Chief Executive Officer (CEO).

The salary of the CEO is determined by the Board, and was last set in 2007 when the post became vacant. The remuneration of all other staff is set according to a bespoke job evaluation scheme, benchmarked to the Croner Charity Rewards database. All salaries are subject to an annual cost of living review.

| | |
|----------------------------|----------------------------|
| Patron | HRH The Duke of Edinburgh |
| President Designate | F R Gardner OBE TD VR FRGS |

Board of Trustees

| | | |
|--|-------------------|---------|
| <i>Chair</i> | Prof J A Gill | 2016-20 |
| <i>Honorary Treasurer</i> | I Packer FCA | 2016-20 |
| <i>Chair of Finance & Risk Committee</i> | J Spencer | 2015-22 |
| <i>Chair of Governance & Nominations Committee</i> | F M Hurst | 2015-22 |
| <i>Chair of Regional Network Committee</i> | Lt Col R C Dickey | 2014-19 |
| <i>Chair of Ringing Committee</i> | Dr I P Bainbridge | 2016-20 |
| <i>Ordinary Board Members</i> | Dr F Barclay | 2014-20 |
| | Dr S Hunter | 2017-21 |
| | D Jardine | 2016-19 |
| | Dr D M Parker | 2014-21 |
| | Dr D J Reynolds | 2016-19 |
| | N A Sherwin | 2017-20 |

Vice Presidents

| | |
|--------------------|---------|
| Prof S Bearhop | 2019-26 |
| K F Betton | 2014-21 |
| Prof T R Birkhead | 2013-20 |
| Prof I P F Owens | 2016-23 |
| Prof A R Watkinson | 2012-19 |

Finance & Risk Committee

Chair J Spencer; Dr S Hunter; I Packer; Dr D J Reynolds.

Governance & Nominations Committee

Chair F M Hurst; Dr D M Parker; N Sherwin.

Regional Network Committee

Chair Lt Col R C Dickey; B Galpin; C Gunn; D Jardine; D McGarvie; W Morris; Dr D M Parker; S W Petrek; S Taylor.

Ringing Committee

Chair Dr I P Bainbridge; J Black; A C Blackburn; Dr R K Broughton; A V Cross; Dr S Hunter; P Roper; Dr L Wright.
Representatives: I Lloyd; A Dodds.

Senior Leadership Team

Chief Executive Officer Dr A Clements; *Director of Science* Dr J W Pearce-Higgins;
Director of Engagement Dr D I P Evans; *Director of Finance & Services, Company Secretary* A T Scott ACIS.

Past Chairs and Presidents

| <i>Chairs</i> | <i>Presidents</i> |
|--|-------------------------------------|
| 1935-39 The Right Hon. Earl of Mansfield | 1958-60, 65-68 R C Homes |
| 1940-41 The Right Hon. Malcolm MacDonald MP | 1961-64 C A Norris |
| 1942-47 Dr A Landsborough Thomson CB OBE DSc | 1969-72 I J Ferguson-Lees |
| 1948 Dr E M Nicholson CB CVO | 1973-76 R A O Hickling |
| 1949 A W Boyd MC | 1977-80 J M McMeeking MBE |
| 1950 Sir Norman Kinnear | 1981-84 S M Taylor |
| 1951-56 Major-General H P W Houston | 1985-89 J A Hancock OBE |
| 1957 R C Homes | 1990-93 R P Howard |
| 1988-91 G H Green | 1994-96 Sir William Wilkinson |
| 1992-96 I C Castle | 1997-2001 Sir Frederick Holliday |
| 1996-2000 Dr H P Sitters | 2002-05 Lord Blakenham |
| 2001-04 A J Martin | 2006-13 Baroness Young of Old Scone |
| 2005-08 Dr S Hunter | 2014-18 C G Packham |
| 2009-13 Prof I Newton FRS OBE | |
| 2014-16 Prof A D Fox | |

Related Parties

The BTO’s wholly owned subsidiary, BTO Services Ltd, was established to undertake commercial activities to support the work of the BTO, and gifts its profits to the Trust. On 30 August 2017 BTO Services Ltd acquired the ring manufacturer Porzana Ltd. The net assets and activities of Porzana Ltd were subsequently hived up to BTO Services Ltd and it then became dormant.

The BTO co-operates with many other charities, with government agencies and other bodies in pursuit of its objectives, as illustrated in this report.

Volunteers

The Trust depends on the contributions of many thousands of volunteers who participate in BTO surveys and other activities. We are greatly indebted to them, and especially to the Regional Representatives and other regional volunteers who organise so much BTO activity at a local level. BTO volunteers contributed the equivalent of approximately 224,900 days of work in 2018 (2017: 219,700 days).

Risk Management

A risk register is maintained which identifies the significant risks faced by the BTO and the measures in place to manage and mitigate those risks. These are monitored by the Senior Leadership Team and reviewed by the Finance & Risk Committee and the Board.

Fundraising Standards

We follow the Fundraising Regulator’s Code of Fundraising Practice. We undertake all fundraising from individuals in-house but during this year we used the services of a specialist consultancy to help us research and approach charitable trusts and foundations in support of our work. We have not received any complaints regarding our fundraising practices. We take all reasonable steps to treat supporters fairly and transparently, especially if we believe they may be in a vulnerable position.

Investments

The Memorandum of Association permits the Trust to invest monies not immediately required for its purposes as the trustees see fit. The trustees’ investment policy is to maximise long term total return by investing in a combination of 40% high quality short dated bonds and 60% globally diversified equities. The equities part of the portfolio is invested in a sustainable fund (see Note 10). Investment performance against benchmark was as follows:

| | Portfolio | Benchmark |
|----------------------------------|-----------|-----------|
| Year ended 31 March 2019 | +7.04% | +7.76% |
| Since inception (28 August 2014) | +32.76% | +38.96% |

Objectives and Activities

Charitable Objects

The objects of the Trust, as set out in its Memorandum of Association are, for the benefit of the nation:

- (i) To promote, organise, carry on and encourage study and research and particularly field work for the advancement of knowledge in all branches of the Science of Ornithology.
- (ii) Permanently to preserve and protect lands and objects which by their natural features are suitable for the preservation and study of bird life and of fauna and flora generally.

Public Benefit

The trustees have complied with the duty in Section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission. The following paragraphs set out in detail the aims, activities and performance of the Trust, and the way in which they provide public benefit.

Objectives and Activities

The BTO’s purpose and public benefit is to deliver objective information and advice, through undertaking impartial research and analysis about birds, other species and habitats, to advance the understanding of nature. We inform policies and evidence-based decisions that impact on the environment such that future generations can benefit from a healthy and wildlife-rich environment. The BTO does this by:

- Sustaining long-term extensive programmes and smaller scale intensive research to study the population trends, movements, breeding, survival, ecology and behaviour of wild birds;
- Encouraging, enthusing, training and supporting volunteers to take part in scientific studies;
- Bringing together professional scientists and volunteer birdwatchers in surveys of wildlife (particularly, but not exclusively, birds);
- Analysing the data gathered through these studies, making information available to Government and other bodies, and publishing the results in the primary scientific literature and via the internet, the birdwatching and conservation press and the media more generally.

Strategic Report

The Strategic Report (Achievements and Performance, Plans for Future Periods) is on pages 10 to 34.

Principal Risks and Uncertainties

The trustees consider that the principal risks and uncertainties which could affect BTO’s ability to deliver its objectives in the next year and beyond are public expenditure reductions leading to reduced contract, grant and partnership funding, and in the medium to long term, the final salary pension scheme deficit. Both of these are able to be mitigated through the continued growth strategy.

Financial Review

This year for the first time ever we received legacy income of over £1million, a wonderful testament to the generosity of members and supporters and their belief in the mission of the BTO. Together with other donations and grants, voluntary income formed 47% of total group income. We aim to raise this to over 50% in the medium term. Somewhat against the trend there was a significant increase in income from publicly funded contracts, and this compensated for lower than expected consultancy work and the loss of our main commercial sponsor Gardman due to its going into administration following a major warehouse fire. Whilst we will continue to take advantage of any available public funding for work that is aligned with our strategy we remain committed to securing an increased sustainable level of income from appropriate commercial trading activities.

The principal sources of funds continued to be contract research, membership subscriptions, individual donations and legacies. A total of £4,612k was spent during the year on carrying out, supporting and communicating ornithological research. Total income increased by 12% to £6,440k while total expenditure increased by 8% to £6,336k, giving a surplus before investment gains of £104k. After investment gains of £34k and an actuarial loss of £62k on the defined benefit pension scheme the net movement in funds was £76k positive.

While the impact of the defined benefit pension scheme deficit on the balance sheet remains significant this represents a very long term liability which the trustees are managing on a sustainable long term basis.

Reserves

The Board has an unrestricted free reserves target range of 9 to 12 weeks’ operating expenditure. These reserves are held against any unexpected falls in income or other unforeseen circumstances. Unrestricted funds excluding tangible fixed assets and the defined benefit pension liability at 31 March 2019 totalled £1,206k (2018: £911k), equivalent to 10 weeks’ expenditure (2018: 8 weeks’).

Statement of Board Members' Responsibilities

The Board members are responsible, as Directors of the Company, for preparing the Annual Report (including the Strategic Report) and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Company law requires the Board members to prepare financial statements for each financial year, which give a true and fair view of the state of affairs of the charitable company and the group at the year end and of the incoming resources and application of resources, including the income and expenditure, of the charitable company and the group for the year. In preparing these financial statements, Board members are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in SORP 2015 (FRS 102);
- make judgements and estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charitable company and the group will continue in operation.

Board members are responsible for keeping adequate accounting records that disclose with reasonable accuracy at any time the financial position of the charitable company and enable them to ensure that the financial statements comply with the Companies Act 2006, the Charities and Trustee Investment (Scotland) Act 2005 and the Charities Accounts (Scotland) Regulations 2006 (as amended). They are also responsible for safeguarding the assets of the charitable company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Board members are responsible for the maintenance and integrity of the corporate and financial information included on the Trust's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

In so far as Board members are aware:

- there is no relevant audit information of which the Trust's auditor is unaware; and
- Board members have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the auditor is aware of that information.

Auditor

A resolution to re-appoint Ensors Accountants LLP as auditor will be proposed at the Annual General Meeting under section 485 of the Companies Act 2006.

The Trustees' Report (incorporating the Strategic Report) was approved by the Board as Directors and Trustees and authorised for issue on 30 July 2019.



Prof J A Gill
Chairman



I Packer FCA
Honorary Treasurer

Opinion

We have audited the financial statements of The British Trust for Ornithology (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 March 2019 which comprise the Consolidated Statement of Financial Activities, the Charity Statement of Financial Activities, the Consolidated Group and Charity Balance Sheets, the Consolidated Statement of Cash Flows, and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charitable company's affairs as at 31 March 2019 and of the group's and the parent charitable company's incoming resources and application of resources, including its income and expenditure for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group and parent charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the trustees' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the trustees have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's or parent charitable company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

Other information

The trustees are responsible for the other information. The other information comprises the information included in the Trustees' and Directors' Report, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Opinion on other matter prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Board Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Board Report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of our knowledge and understanding of the company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report and the Board Report.

We have nothing to report in respect of the following matters where the Companies Act 2006 and the Charities Accounts (Scotland) Regulations 2006 (as amended) require us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent charitable company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent charitable company's financial statements are not in agreement with the accounting records or returns; or
- certain disclosure of trustees' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of Board Members

As explained more fully in the Statement of Board Members' Responsibilities set out on page 48 the trustees (who are also the directors of the British Trust for Ornithology for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

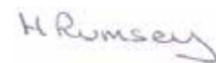
In preparing the financial statements, the trustees are responsible for assessing the group's and parent charitable company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the group or the parent charitable company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of financial statements is located on the Financial Reporting Council's website at www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

This report is made solely to the charitable company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and to the charitable company's trustees, as a body, in accordance with section 44(1) (c) of the Charities and Trustee Investment (Scotland) Act 2005 and regulation 10 of the Charities Accounts (Scotland) Regulations 2006 (as amended). Our audit work has been undertaken so that we might state to the charitable company's members and its trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charitable company, the charitable company's members as a body and its trustees as a body, for our audit work, for this report, or for the opinions we have formed.



Helen Rumsey, Senior Statutory Auditor
For and on behalf of
Ensors Accountants LLP, Statutory Auditors
Cardinal House
46 St Nicholas Street
Ipswich IP1 1TT

**The British Trust for Ornithology
Consolidated Statement of Financial Activities (Including Income and Expenditure Account)
for the Year Ended 31 March 2019**

| | Note | Unrestricted Funds £'000 | Restricted Funds £'000 | Total 2019 £'000 | Total 2018 £'000 |
|---|-------|--------------------------------|------------------------------|------------------------|------------------------|
| Income and endowments from: | | | | | |
| Donations and legacies | 3 | 2,587 | 417 | 3,004 | 2,518 |
| Charitable activities | 3 | 2,412 | 5 | 2,417 | 2,092 |
| Other trading activities | 3 | 1,018 | - | 1,018 | 1,130 |
| Investments | 3 | 1 | - | 1 | 1 |
| Total income and endowments | | 6,018 | 422 | 6,440 | 5,741 |
| Expenditure on: | | | | | |
| Raising funds | 4 | 1,468 | 15 | 1,483 | 1,302 |
| Charitable activities | 4 | 4,101 | 511 | 4,612 | 4,497 |
| Other – Amounts recognised as expenditure on defined benefit pension scheme | 21 | 241 | - | 241 | 93 |
| Total expenditure | 7 | 5,810 | 526 | 6,336 | 5,892 |
| Net income/(expenditure) before net gain/(loss) on investments | | 208 | (104) | 104 | (151) |
| Net gain/(loss) on investments | | 34 | - | 34 | 2 |
| Net income/ (expenditure) | | 242 | (104) | 138 | (149) |
| Transfers between funds | 16,17 | (54) | 54 | - | - |
| Other recognised gains/(losses): | | | | | |
| Gains on revaluation of fixed assets | 9 | - | - | - | 743 |
| Actuarial (loss) on defined benefit pension scheme | 21 | (62) | - | (62) | (162) |
| Net movement in funds | | 126 | (50) | 76 | 432 |
| Reconciliation of funds | | | | | |
| Total funds brought forward | | (679) | 748 | 69 | (363) |
| Total funds carried forward | | (553) | 698 | 145 | 69 |

The Statement of Financial Activities includes all gains and losses recognised during the year. All income and expenditure derives from continuing activities.

The notes on pages 55 to 72 form part of these financial statements.

The British Trust for Ornithology
Charity Statement of Financial Activities (Including Income and Expenditure Account)
for the Year Ended 31 March 2019

| | Note | Unrestricted Funds £'000 | Restricted Funds £'000 | Total 2019 £'000 | Total 2018 £'000 <i>Restated</i> |
|---|-------|--------------------------------|------------------------------|------------------------|---|
| Income and endowments from: | | | | | |
| Donations and legacies | 3 | 2,755 | 417 | 3,172 | 2,991 |
| Charitable activities | 3 | 2,412 | 5 | 2,417 | 2,092 |
| Other trading activities | 3 | 404 | - | 404 | 399 |
| Investments | 3 | 1 | - | 1 | 1 |
| Total income and endowments | | 5,572 | 422 | 5,994 | 5,483 |
| Expenditure on: | | | | | |
| Raising funds | 4 | 1,022 | 15 | 1,037 | 1,044 |
| Charitable activities | 4 | 4,101 | 511 | 4,612 | 4,497 |
| Other – Amounts recognised as expenditure on defined benefit pension scheme | 21 | 241 | - | 241 | 93 |
| Total expenditure | | 5,364 | 526 | 5,890 | 5,634 |
| Net income/(expenditure) before net gain/(loss) on investments | | 208 | (104) | 104 | (151) |
| Net gain/(loss) on investments | | 34 | - | 34 | 2 |
| Net income/ (expenditure) | | 242 | (104) | 138 | (149) |
| Transfers between funds | 16,17 | (54) | 54 | - | - |
| Other recognised gains/(losses): | | | | | |
| Gains on revaluation of fixed assets | 9 | - | - | - | 743 |
| Actuarial (loss) on defined benefit pension scheme | 21 | (62) | - | (62) | (162) |
| Net movement in funds | | 126 | (50) | 76 | 432 |
| Reconciliation of funds | | | | | |
| Total funds brought forward | | (679) | 748 | 69 | (363) |
| Total funds carried forward | | (553) | 698 | 145 | 69 |

The Statement of Financial Activities includes all gains and losses recognised during the year. All income and expenditure derives from continuing activities.

The notes on pages 55 to 72 form part of these financial statements.

The British Trust for Ornithology
Consolidated Group and Charity Balance Sheets
as at 31 March 2019

| | Note | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|---|------|------------------------|------------------------|--------------------------|--------------------------|
| Fixed assets | | | | | |
| Tangible assets | 9 | 1,923 | 1,914 | 1,921 | 1,911 |
| Investments | 10 | 372 | 637 | 372 | 637 |
| | | <u>2,295</u> | <u>2,551</u> | <u>2,293</u> | <u>2,548</u> |
| Current assets | | | | | |
| Stocks | 11 | 301 | 319 | - | - |
| Debtors | 12 | 1,615 | 966 | 1,920 | 1,266 |
| Cash at bank and in hand | | 1,402 | 1,275 | 1,326 | 1,199 |
| | | <u>3,318</u> | <u>2,560</u> | <u>3,246</u> | <u>2,465</u> |
| Creditors: | | | | | |
| Amounts falling due within one year | 13 | (1,709) | (1,492) | (1,635) | (1,394) |
| Net current assets | | <u>1,609</u> | <u>1,068</u> | <u>1,611</u> | <u>1,071</u> |
| Total assets less current liabilities | | <u>3,904</u> | <u>3,619</u> | <u>3,904</u> | <u>3,619</u> |
| Creditors: | | | | | |
| Amounts falling due after one year | 14 | (77) | (46) | (77) | (46) |
| Net assets excluding defined benefit pension liability | | <u>3,827</u> | <u>3,573</u> | <u>3,827</u> | <u>3,573</u> |
| Defined benefit pension liability | 21 | (3,682) | (3,504) | (3,682) | (3,504) |
| Net assets including defined benefit pension liability | 18 | <u>145</u> | <u>69</u> | <u>145</u> | <u>69</u> |
| Represented by: | | | | | |
| Restricted funds | 16 | 698 | 748 | 698 | 748 |
| Unrestricted funds | 17 | 3,129 | 2,825 | 3,129 | 2,825 |
| Pension reserve | 17 | (3,682) | (3,504) | (3,682) | (3,504) |
| Total funds | 18 | <u>145</u> | <u>69</u> | <u>145</u> | <u>69</u> |

Approved by the Board and authorised for issue on 30 July 2019 and signed on its behalf by:

Chair

Prof J A Gill

Honorary Treasurer

I Packer FCA

Company registration number 00357284.

The notes on pages 55 to 72 form part of these financial statements.

**The British Trust for Ornithology
Consolidated Statement of Cash Flows
For the Year Ended 31 March 2019**

| | | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|--|-------------|------------------------|------------------------|--------------------------|--------------------------|
| | Note | | | | |
| Net cash inflow / (outflow) from operating activities | 19 | (137) | (28) | (137) | 92 |
| Cash flow from investing activities | | | | | |
| Payments to acquire tangible fixed assets | 9 | (39) | (38) | (39) | (34) |
| Proceeds from sales of tangible fixed assets | | 3 | - | 3 | - |
| Proceeds from the sale of investments | | 299 | - | 299 | - |
| Investment income received | | 1 | 1 | 1 | 1 |
| Net cash flow from investing activities | | 264 | (37) | 264 | (33) |
| Net increase/(decrease) in cash for the year | | 127 | (65) | 127 | 59 |
| Cash at bank and in hand at 1 April | | 1,275 | 1,340 | 1,199 | 1,140 |
| Cash at bank and in hand at 31 March | | 1,402 | 1,275 | 1,326 | 1,199 |
| Analysis of Cash at Bank and in Hand | | 2019 | 2018 | 2019 | 2018 |
| This comprises: | | £'000 | £'000 | £'000 | £'000 |
| Bank current accounts and cash in hand | | 170 | 92 | 94 | 16 |
| Bank instant access deposits | | 1,232 | 1,183 | 1,232 | 1,183 |
| Cash at bank and in hand at 31 March | | 1,402 | 1,275 | 1,326 | 1,199 |

Bank instant access bank deposits carry a variable rate of interest.

The notes on pages 55 to 72 form part of these financial statements.

**The British Trust for Ornithology
Notes to the Consolidated Accounts
For the Year Ended 31 March 2019**

1. ACCOUNTING POLICIES

a) Basis of Preparation

The charity constitutes a public benefit entity as defined by FRS 102. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) issued on 16 July 2014, the Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland (FRS 102), the Charities Act 2011, the Companies Act 2006 and UK Generally Accepted Practice as it applies from 1 January 2015.

The financial statements are prepared on a going concern basis under the historical cost convention, modified to include certain items at fair value. The financial statements are prepared in pounds sterling (rounded to the nearest thousand) which is the functional currency of the charity and the group.

b) Group Financial Statements

These financial statements consolidate the results of the charity and its wholly owned trading subsidiary BTO Services Limited on a line by line basis.

c) Income

Income from donations, gifts and legacies is recognised where there is entitlement, the amount can be measured reliably and it is probable that the income will be received.

Income from charitable activities includes income receivable under contract which is recognised as earned as the related work is performed. Income from grant funding included in this category provides funding to support charitable activities and is recognised where there is entitlement, certainty of receipt and the amount can be measured with sufficient reliability.

Income is deferred when it is received in advance of the services it relates to. Life membership income is released to the Statement of Financial Activities in equal instalments over ten years.

Income from the trading subsidiary and other commercial trading activities is recognised as earned as the related goods and services are provided.

Investment income, sponsorship and royalty income and membership subscription income are recognised on a receivable basis.

d) Expenditure

Expenditure is recognised when a liability is incurred. Costs are allocated directly to activity cost categories. The cost of accrued holiday pay not taken at the year end is accrued.

Costs of raising funds are those costs incurred in attracting voluntary income, including membership subscriptions, in carrying out trading activities and those costs associated with royalties and sponsorship income.

Costs of charitable activities include scientific research contracts, allocated fund research work and restricted fund research work. They also include volunteer surveyor support and science communication costs.

Governance costs include those incurred in the governance of the charity and the safeguarding of its assets and are primarily associated with constitutional and statutory requirements.

Support costs include central functions and have been allocated to activity cost categories on a staff cost basis.

d) Expenditure (continued)

VAT has been reclaimed on allowable expenses under the Business/Non-Business and the partial exemption rules. Where not reclaimable it has been included within expenses.

e) Tangible Fixed Assets

Individual assets costing £1k or more are initially capitalised at cost.

Tangible fixed assets are depreciated on a straight line basis over their estimated useful lives as follows:

| Asset Category | Annual Rate |
|-------------------------|-------------|
| Furniture and Equipment | 25% |
| Computer Equipment | 25% |
| Motor Vehicles | 25% |

The freehold property and land are not depreciated as, in the opinion of the trustees, any such depreciation charged will be immaterial. Annual impairment reviews are carried out on the property. Revaluations are performed every five years, or as the trustees consider necessary, by qualified external valuers. The increase or decrease on revaluation is credited or charged to the fund holding the asset.

f) Investments

Investments are recognised initially at fair value which is normally the transaction price excluding transaction costs. Subsequently, they are measured at fair value with changes recognised in 'Net gain/(loss) on investments' in the Statement of Financial Activities if the shares are publicly traded or their fair value can otherwise be measured reliably. Other investments are measured at cost less impairment.

g) Stock

Stock is valued at the lower of cost and net realisable value. Net realisable value is based on estimated selling price less further costs to completion and disposal. Cost is calculated on a first in first out basis.

h) Debtors and creditors falling due within one year

Debtors and creditors with no stated interest rate and falling due within one year are recorded at transaction price. Any losses arising from impairment are recognised in expenditure.

i) Cash at bank

Cash at bank includes demand deposits.

j) Financial instruments

The group has only financial assets and liabilities that qualify as basic financial instruments, such as debtors and creditors with no stated interest rate and payable within one year, which are recorded at transaction price. Any losses arising from impairment are recognised as other operating expenditure in the Statement of Financial Activities.

k) Foreign Currency Translation

Monetary assets and liabilities denominated in foreign currencies are translated into sterling at the rates of exchange ruling at the balance sheet dates. Transactions in foreign currencies are recorded at the rate ruling at the transaction date. All differences are taken to the Statement of Financial Activities.

l) Funds Structure

The Trust has a number of restricted funds to account for situations where funds have been raised for a specific purpose. All other funds are unrestricted funds. Where the trustees intend to use part of the unrestricted funds to provide longer-term funding for BTO projects and core activities, designated funds are set up to reflect this. A Pension reserve fund has been created so that movements and balances relating to the defined benefit pension scheme valuations can be separately identified. The funds in each of these categories are disclosed in notes 16 and 17.

m) Retirement Benefits

The defined benefit scheme provides benefits for staff based on final pensionable salary. The scheme was closed to future accrual with effect from 1 April 2013. The assets of the scheme are held separately from those of the Trust, being invested with independent fund managers and are measured at fair value with changes recognised in the Statement of Financial Activities as set out in Note 21. Defined benefit pension liabilities are measured using the projected unit cost method and discounted at the current rate of return on a high quality corporate bond of equivalent term and currency to the liability. Under FRS 102, any net liability arising based on these valuations is the best estimate of the present value of the actual amounts to be paid out of the scheme, less the fair value of the scheme assets. The net of the interests on the scheme assets and liabilities is charged to the Statement of Financial Activities. Past service costs are recognised as expenditure when a liability is incurred and are charged to the Statement of Financial Activities. Actuarial gains and losses are recognised in the Statement of Financial Activities.

The Trust also makes payments in respect of employees' own defined contribution schemes, through a group self-invested personal pension arrangement. For these schemes, the amount charged to the Statement of Financial Activities in respect of pension costs is the contributions payable in the year. Differences between contributions payable in the year and contributions actually paid are included as either accruals or prepayments in the balance sheet.

n) Going Concern

The trustees have prepared the financial statements on a going concern basis. A schedule of affordable deficit repair payments has been agreed with the pension fund trustees to extinguish the defined benefit pension scheme deficit by 2033.

o) Judgements and key sources of estimation uncertainty

No judgments (apart from those involving estimations) have been made in the process of applying the entity's accounting policies.

There are no key assumptions concerning the future or other sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

2. MEMBERS' LIABILITY

Under the Memorandum of Association of the Trust, members are required to undertake to contribute to the assets of the Trust in the event of its being wound up while they are members, or within one year after they cease to be members, for payment of the debts and liabilities of the Trust contracted whilst they were still members and of the costs, charges and expenses of winding up such an amount as may be required, but not exceeding £1 each.

3. ANALYSIS OF INCOME

| | Group 2019 £'000 | Group 2018 £'000 <i>Restated</i> | Charity 2019 £'000 | Charity 2018 £'000 <i>Restated</i> |
|---|------------------------|---|--------------------------|---|
| Donations and legacies | | | | |
| Membership subscriptions & donations | 974 | 973 | 974 | 973 |
| Individual donations | 619 | 509 | 619 | 509 |
| Corporate & trust donations & grants | 245 | 293 | 413 | 766 |
| Legacies | 1,166 | 743 | 1,166 | 743 |
| | <u>3,004</u> | <u>2,518</u> | <u>3,172</u> | <u>2,991</u> |
| Charitable activities | | | | |
| Core surveys - JNCC Partnership | 807 | 771 | 807 | 771 |
| Core surveys - Other | 54 | 44 | 54 | 44 |
| Other surveys & research - Voluntary funded | 5 | 10 | 5 | 10 |
| Other surveys & research - Contract funded | 1,345 | 1,025 | 1,345 | 1,025 |
| Research communication | 75 | 88 | 75 | 88 |
| General volunteer survey support | 111 | 110 | 111 | 110 |
| Nunnery Lakes Reserve | 20 | 44 | 20 | 44 |
| | <u>2,417</u> | <u>2,092</u> | <u>2,417</u> | <u>2,092</u> |
| Other trading activities | | | | |
| Ringling & tagging sales | 596 | 494 | - | - |
| Publications & general sales | 35 | 58 | - | - |
| Corporate sponsorship & royalties | 70 | 124 | - | - |
| Consultancy | 244 | 309 | - | - |
| Data-related sales | 63 | 86 | - | - |
| Other | 10 | 59 | 9 | 21 |
| Income from costs recharged to subsidiary | - | - | 395 | 378 |
| | <u>1,018</u> | <u>1,130</u> | <u>404</u> | <u>399</u> |
| Investment income | | | | |
| Bank interest receivable | 1 | 1 | 1 | 1 |

Data-related sales previously shown under Charitable activities are now shown under Other trading activities as these are transacted through the trading subsidiary. The corresponding previous year figures have been restated accordingly.

| Analysis by fund type | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|---------------------------------|------------------------|------------------------|--------------------------|--------------------------|
| Donations and legacies | | | | |
| Unrestricted | 2,587 | 2,135 | 2,755 | 2,608 |
| Restricted | 417 | 383 | 417 | 383 |
| | <u>3,004</u> | <u>2,518</u> | <u>3,172</u> | <u>2,991</u> |
| Charitable activities | | | | |
| Unrestricted | 2,412 | 2,090 | 2,412 | 2,090 |
| Restricted | 5 | 2 | 5 | 2 |
| | <u>2,417</u> | <u>2,092</u> | <u>2,417</u> | <u>2,092</u> |
| Other trading activities | | | | |
| Unrestricted | 1,018 | 1,130 | 404 | 399 |
| Restricted | - | - | - | - |
| | <u>1,018</u> | <u>1,130</u> | <u>404</u> | <u>399</u> |

4. ANALYSIS OF EXPENDITURE

| | Group 2019 £'000 | Group 2018 £'000 <i>Restated</i> | Charity 2019 £'000 | Charity 2018 £'000 <i>Restated</i> |
|---|------------------------|---|--------------------------|---|
| Raising funds | | | | |
| Donations and legacies | | | | |
| Membership subscriptions & donations | 270 | 281 | 270 | 281 |
| Individual donations | 282 | 237 | 282 | 237 |
| Corporate & trust donations & grants | 74 | 134 | 74 | 134 |
| Legacies | 10 | 2 | 10 | 2 |
| | <u>636</u> | <u>654</u> | <u>636</u> | <u>654</u> |
| Other trading activities | | | | |
| Ringling & tagging costs | 477 | 348 | - | - |
| Publications & general costs | 44 | 56 | - | - |
| Corporate sponsorship & royalties | 80 | 2 | - | - |
| Consultancy | 204 | 207 | - | - |
| Data-related costs | 39 | 33 | 14 | 13 |
| Other | 3 | 2 | 2 | 2 |
| Costs recharged to subsidiary | - | - | 385 | 375 |
| | <u>847</u> | <u>648</u> | <u>401</u> | <u>390</u> |
| | <u>1,483</u> | <u>1,302</u> | <u>1,037</u> | <u>1,044</u> |
| Charitable activities | | | | |
| Core surveys - JNCC Partnership | 1,310 | 1,399 | 1,310 | 1,399 |
| Core surveys - Other | 455 | 379 | 455 | 379 |
| Other surveys & research - Voluntary funded | 748 | 850 | 748 | 850 |
| Other surveys & research - Contract funded | 1,295 | 1,138 | 1,295 | 1,138 |
| Research communication | 565 | 486 | 565 | 486 |
| General volunteer survey support | 186 | 171 | 186 | 171 |
| Nunnery Lakes Reserve | 53 | 74 | 53 | 74 |
| | <u>4,612</u> | <u>4,497</u> | <u>4,612</u> | <u>4,497</u> |

Data-related costs previously shown under Charitable activities are now shown under Other trading activities, as these are transacted through the trading subsidiary. The corresponding previous year figures have been restated accordingly.

| Analysis by fund type | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|------------------------------|------------------------|------------------------|--------------------------|--------------------------|
| Raising funds | | | | |
| Unrestricted | 1,468 | 1,275 | 1,022 | 1,018 |
| Restricted | 15 | 27 | 15 | 26 |
| | <u>1,483</u> | <u>1,302</u> | <u>1,037</u> | <u>1,044</u> |
| Charitable activities | | | | |
| Unrestricted | 4,101 | 4,019 | 4,101 | 4,019 |
| Restricted | 511 | 478 | 511 | 478 |
| | <u>4,612</u> | <u>4,497</u> | <u>4,612</u> | <u>4,497</u> |

| 5. NET INCOME / (EXPENDITURE) | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Net income for the year is stated after charging: | | |
| Statutory Auditors' remuneration: | | |
| Audit of the charity's annual accounts | 13 | 13 |
| Audit of the trading subsidiary's annual accounts | 4 | 4 |
| Audit of the charity's final salary pension scheme | 2 | 2 |
| Depreciation (Note 9) | 30 | 37 |
| Profit on disposal of fixed assets | 3 | - |

| 6. STAFF COSTS | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Wages and salaries | 3,194 | 3,031 |
| Social security costs | 279 | 268 |
| Defined contribution pension plan costs (Note 21) | 352 | 333 |
| Expenditure recognised on defined benefit pension scheme (Note 21) | 241 | 93 |
| | <u>4,066</u> | <u>3,725</u> |

| The number of employees whose emoluments exceeded £60,000 fell within the following bands: | 2019 | 2018 |
|--|----------|----------|
| £70,001 - £80,000 | 1 | 1 |
| £60,001 - £70,000 | <u>1</u> | <u>1</u> |

Trustees receive no remuneration, and there were no related party transactions requiring disclosure. The total remuneration including Social security costs and pension contributions of the Senior Leadership Team was £312k (2018: £301k). The salary of the CEO during the period was £78k (2018 £77k), with the same pension and other benefits as were applicable to all staff. Expenses were reimbursed to 11 (2018: 11) trustees as follows:

| | 2019 £'000 | 2018 £'000 |
|----------------------|---------------|---------------|
| Travel & subsistence | <u>5</u> | <u>6</u> |

Average numbers of staff and fulltime equivalents (FTE)

| | 2019 | | 2018 | |
|-----------------------|------------|--------------|------------|-------------|
| | No | FTE | No | FTE |
| Permanent posts | 113 | 102.3 | 113 | 99.2 |
| Seasonal fieldworkers | 3 | 1.9 | - | 0.4 |
| | <u>116</u> | <u>104.2</u> | <u>113</u> | <u>99.6</u> |

| 7. TOTAL EXPENDITURE | Direct costs £'000 | Support costs £'000 | 2019 Total £'000 | 2018 Total £'000 |
|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| Raising funds | 1,366 | 117 | 1,483 | 1,302 |
| Charitable activities | 4,107 | 505 | 4,612 | 4,497 |
| Other | 241 | - | 241 | 93 |
| | <u>5,714</u> | <u>622</u> | <u>6,336</u> | <u>5,892</u> |

| 8. SUPPORT COSTS | Premises £'000 | IT & Office Services £'000 | Human Resources £'000 | Management & Finance £'000 | Governance £'000 | 2019 Total £'000 | 2018 Total £'000 |
|-----------------------|-------------------|-------------------------------|--------------------------|-------------------------------|---------------------|------------------------|------------------------|
| Raising funds | 3 | 4 | 42 | 56 | 12 | 117 | 123 |
| Charitable activities | 11 | 19 | 183 | 241 | 51 | 505 | 516 |
| | <u>14</u> | <u>23</u> | <u>225</u> | <u>297</u> | <u>63</u> | <u>622</u> | <u>639</u> |

All support costs are apportioned on a staff cost basis. Governance costs include statutory auditors' remuneration, Board meeting expenses, and the staff cost of servicing Board meetings.

9. TANGIBLE FIXED ASSETS - GROUP

| | Freehold Property and Land £'000 | Furniture and Equipment £'000 | Computer Equipment £'000 | Motor Vehicles £'000 | Total £'000 |
|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|-------------------------|----------------|
| Cost or valuation at 1 April 2018 | 1,850 | 229 | 400 | 115 | 2,594 |
| Additions | - | 4 | 35 | - | 39 |
| Disposals | - | (19) | (31) | (9) | (59) |
| At 31 March 2019 | <u>1,850</u> | <u>214</u> | <u>404</u> | <u>106</u> | <u>2,574</u> |
| Depreciation at 1 April 2018 | - | 215 | 367 | 98 | 680 |
| Depreciation charge | - | 6 | 17 | 7 | 30 |
| Disposals | - | (19) | (31) | (9) | (59) |
| At 31 March 2019 | <u>-</u> | <u>202</u> | <u>353</u> | <u>96</u> | <u>651</u> |
| Net book value at 31 March 2019 | <u>1,850</u> | <u>12</u> | <u>51</u> | <u>10</u> | <u>1,923</u> |
| Net book value at 1 April 2018 | <u>1,850</u> | <u>14</u> | <u>33</u> | <u>17</u> | <u>1,914</u> |

9. TANGIBLE FIXED ASSETS - CHARITY

| | Freehold Property and Land £'000 | Furniture and Equipment £'000 | Computer Equipment £'000 | Motor Vehicles £'000 | Total £'000 |
|-----------------------------------|---|--|--------------------------------|----------------------------|----------------|
| Cost or valuation at 1 April 2018 | 1,850 | 225 | 400 | 115 | 2,590 |
| Additions | - | 4 | 35 | - | 39 |
| Disposals | - | (19) | (31) | (9) | (59) |
| At 31 March 2019 | <u>1,850</u> | <u>210</u> | <u>404</u> | <u>106</u> | <u>2,570</u> |
| Depreciation at 1 April 2018 | - | 214 | 367 | 98 | 679 |
| Depreciation charge | - | 5 | 17 | 7 | 29 |
| Disposals | - | (19) | (31) | (9) | (59) |
| At 31 March 2019 | <u>-</u> | <u>200</u> | <u>353</u> | <u>96</u> | <u>649</u> |
| Net book value at 31 March 2019 | <u>1,850</u> | <u>10</u> | <u>51</u> | <u>10</u> | <u>1,921</u> |
| Net book value at 1 April 2018 | <u>1,850</u> | <u>11</u> | <u>33</u> | <u>17</u> | <u>1,911</u> |

The Nunnery and Nunnery Lakes Reserve, the freehold property and land owned and occupied by the British Trust for Ornithology, were valued by qualified external valuers, Fenn Wright Chartered Surveyors, on 31 March 2018 on the basis of existing use value, at £1,850k.

The trustees discussed the condition and value of the freehold property at their meeting on 30 July 2019 and agreed that there had been no material change in either since the last external valuation in March 2018.

On an historical cost basis, the freehold property and land would have been included at a cost and net book value of £2,284k (2018: £2,284k).

10. INVESTMENTS

The Group

Investment Funds

| | Cost 28 August 2014 £'000 | Market Value 1 April 2018 £'000 | Disposals proceeds £'000 | Additions at cost £'000 | Gains /(losses) £'000 | Market value 31 March 2019 £'000 |
|---|---------------------------------------|---|--------------------------------|-------------------------------|-----------------------------|---|
| Birds in Trust Fund | | | | | | |
| Dimensional Global Short Dated Bond | 94 | 104 | (47) | - | - | 57 |
| Dimensional Global Sustainability Core Equity Wrap Cash | 133 | 174 | (86) | - | 16 | 104 |
| | <u>4</u> | <u>6</u> | <u>-</u> | <u>-</u> | <u>(1)</u> | <u>5</u> |
| | <u>231</u> | <u>284</u> | <u>(133)</u> | <u>-</u> | <u>15</u> | <u>166</u> |
| General Funds | | | | | | |
| Dimensional Global Short Dated Bond | 115 | 129 | (59) | - | 1 | 71 |
| Dimensional Global Sustainability Core Equity Wrap Cash | 162 | 217 | (107) | - | 19 | 129 |
| | <u>6</u> | <u>7</u> | <u>-</u> | <u>-</u> | <u>(1)</u> | <u>6</u> |
| | <u>283</u> | <u>353</u> | <u>(166)</u> | <u>-</u> | <u>19</u> | <u>206</u> |
| | <u>514</u> | <u>637</u> | <u>(299)</u> | <u>-</u> | <u>34</u> | <u>372</u> |

The Charity

| | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Investment funds as above | 372 | 637 |
| Shares in Group Undertaking - BTO Services Ltd | - | - |
| | <u>372</u> | <u>637</u> |

The Trust wholly owns its subsidiary undertaking, BTO Services Ltd, which is incorporated in England & Wales, company registration number 02907282. This company operates to promote the work of The British Trust for Ornithology by undertaking commercial activities to support such work. The aggregate value of the share capital and reserves at 31 March 2019 was £100 (2018: £100) and the company reported a nil result after Gift Aid for the year (2018: £nil). The value of the investment in the subsidiary undertaking is £100 (2018: £100) under the equity method of valuation. £168k (2018: £421k) was paid to the Charity under Gift Aid. The following is a summarised statement of income for the subsidiary for the financial year:

| | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Turnover | 1,007 | 1,051 |
| Cost of sales | (656) | (590) |
| Gross profit | <u>351</u> | <u>461</u> |
| Net administrative expenses | (183) | (40) |
| Net profit before payment under Gift Aid | <u>168</u> | <u>421</u> |

Turnover of the subsidiary includes sales to overseas markets of £294k (2018: £99k).

| 11. STOCKS | 2019 | 2018 |
|--|--------------|--------------|
| | £'000 | £'000 |
| The Group | | |
| Finished goods, goods for resale and materials | <u>301</u> | <u>319</u> |
| The Charity | | |
| The charity holds no trading stock. | | |
| | | |
| 12. DEBTORS | 2019 | 2018 |
| | £'000 | £'000 |
| The Group | | |
| Trade and contract debtors | 643 | 545 |
| Taxes recoverable | 236 | 174 |
| Prepayments | 95 | 67 |
| Accrued income | <u>641</u> | <u>180</u> |
| | <u>1,615</u> | <u>966</u> |
| | | |
| | 2019 | 2018 |
| | £'000 | £'000 |
| The Charity | | |
| Trade and contract debtors | 459 | 243 |
| Amounts due from Group undertakings | 551 | 665 |
| Taxes recoverable | 236 | 174 |
| Prepayments | 63 | 59 |
| Accrued income | <u>611</u> | <u>125</u> |
| | <u>1,920</u> | <u>1,266</u> |

| 13. CREDITORS – AMOUNTS FALLING DUE WITHIN ONE YEAR | 2019 | 2018 |
|---|--------------|--------------|
| | £'000 | £'000 |
| The Group | | |
| Trade creditors | 297 | 255 |
| Taxes and Social security costs | 203 | 175 |
| Other creditors | 56 | 57 |
| Accruals | 93 | 91 |
| Deferred income | <u>1,060</u> | <u>914</u> |
| | <u>1,709</u> | <u>1,492</u> |
| | | |
| | 2019 | 2018 |
| | £'000 | £'000 |
| The Charity | | |
| Trade creditors | 290 | 236 |
| Taxes and Social security costs | 220 | 166 |
| Other creditors | 52 | 49 |
| Accruals | 89 | 87 |
| Deferred income | <u>984</u> | <u>856</u> |
| | <u>1,635</u> | <u>1,394</u> |
| | | |
| 14. CREDITORS – AMOUNTS FALLING DUE AFTER ONE YEAR | 2019 | 2018 |
| | £'000 | £'000 |
| The Group | | |
| Deferred income | <u>77</u> | <u>46</u> |
| | | |
| | 2019 | 2018 |
| | £'000 | £'000 |
| The Charity | | |
| Deferred income | <u>77</u> | <u>46</u> |
| | | |
| 15. DEFERRED INCOME RECONCILIATION | 2019 | 2018 |
| | £'000 | £'000 |
| The Group | | |
| Opening balance at 1 April | 960 | 1,015 |
| Amount released to income | (1,229) | (1,260) |
| Amount deferred in year | <u>1,406</u> | <u>1,205</u> |
| Closing balance at 31 March | <u>1,137</u> | <u>960</u> |
| | | |
| | 2019 | 2018 |
| | £'000 | £'000 |
| The Charity | | |
| Opening balance at 1 April | 902 | 941 |
| Amount released to income | (1,060) | (1,161) |
| Amount deferred in year | <u>1,219</u> | <u>1,122</u> |
| Closing balance at 31 March | <u>1,061</u> | <u>902</u> |

16. RESTRICTED FUNDS

The income funds of the charity include restricted funds comprising the following balances of donations and appeal monies given for specific purposes:

| | Balance at 1 Apr 2018 £'000 | Income £'000 | Expenditure £'000 | Transfers £'000 | Balance at 31 Mar 2019 £'000 |
|---|-----------------------------------|-----------------|----------------------|--------------------|------------------------------------|
| Atlas Beyond the Maps Appeal | 19 | 2 | (17) | - | 4 |
| Northern Ireland Fund | 1 | - | - | - | 1 |
| Dilys Breese Fund | 81 | - | (6) | - | 75 |
| Boddy & Sparrow Fund | 2 | - | - | - | 2 |
| Migration Fund | - | 2 | (2) | - | - |
| Nightingale Appeal | 27 | 4 | (20) | - | 11 |
| Owl Fund | 72 | 9 | (81) | - | - |
| Swallow Appeal | 8 | - | - | - | 8 |
| Young Scientists' Fund | 23 | 20 | (19) | - | 24 |
| Garden Research Fund | 72 | 9 | (9) | - | 72 |
| Out of Africa Fund | - | 78 | (98) | 30 | 10 |
| Thrush Fund | 1 | - | - | - | 1 |
| Farmland Birds Appeal | 48 | 4 | (21) | - | 31 |
| Curlew Appeal | 86 | 35 | (67) | - | 54 |
| Arctic Skua Fund | 20 | 75 | (57) | - | 38 |
| BTO Wales Fund | 44 | 2 | (8) | (1) | 37 |
| BirdTrack Fund | 4 | 1 | (5) | - | - |
| Sound Approach Fund | 151 | - | (61) | 3 | 93 |
| Tasso Leventis Fund | 86 | 15 | (12) | (30) | 59 |
| Spotted Flycatcher Appeal | - | 38 | (15) | - | 23 |
| Rhodes Training Fund | - | 35 | - | - | 35 |
| Migrant Swallows & Insect Feeding Paper | - | 14 | (1) | - | 13 |
| Postcode Lottery Grant | - | 22 | (19) | - | 3 |
| Cuckoos & Nightingales Appeal | - | 27 | - | 22 | 49 |
| EDF What's Under Your Feet Fund | - | - | - | 18 | 18 |
| Ringers' Bursary Fund | 2 | 1 | (1) | - | 2 |
| Thorne Ringing Fund | 1 | - | - | - | 1 |
| Small Specific Donations | - | 29 | (7) | 12 | 34 |
| | <u>748</u> | <u>422</u> | <u>(526)</u> | <u>54</u> | <u>698</u> |

The purposes of the funds are as follows:

Atlas Beyond the Maps Appeal continues to support research into Atlas data.

The Northern Ireland Fund has been set up to support the BTO in Northern Ireland.

The Dilys Breese Fund is for projects relating to nesting birds and £6k was expended for costs relating to the annual Dilys Breese Awards.

The Boddy & Sparrow Fund is for awards to the best amateur contribution(s) to either or both of the *Bird Study* and *Ringing & Migration* publications.

The Migration Fund is for research into migrating birds.

The Nightingale Appeal is to fund work on Nightingales and woodland birds.

The Owl Fund is to fund work on Owls.

The Swallow Appeal is to fund work on Swallows and migration.

The Young Scientists' Fund is to support the career development of young scientists.

The Garden Research Fund is to support young scientists work on garden birds.

The Out of Africa Fund is to fund work on African migrants.

The Thrush Fund is to fund work on Thrushes.

16. RESTRICTED FUNDS (Continued)

The Farmland Birds Appeal is to support work on farmland ecology.

The Curlew Appeal is to fund projects on Curlews.

The Arctic Skua Fund is to support Arctic Skua work.

The BTO Wales Fund is to support the BTO in Wales.

The BirdTrack Fund is to support the development of BirdTrack.

The Sound Approach Fund is to support a number of specific projects.

The Tasso Leventis Fund is to support a number of specific projects. £30k was transferred to the Out of Africa Fund with the agreement of the donor.

The Spotted Flycatcher Appeal is to support work on Spotted Flycatcher.

The Rhodes Training Fund is to support survey training courses.

The Migrant Swallows and Insect Feeding Paper donation is to fund a paper on Swallows.

The Postcode Lottery Grant is for the Nunnery Lakes Reserve.

The Cuckoos & Nightingales fund is for research on Cuckoos and Nightingales.

The EDF What's Under Your Feet Fund is to support the What's Under Your Feet survey.

The Ringers' Bursary Fund is to support ringing.

The Thorne Ringing Fund is to support ringing.

Small Specific Donations are small individual donations for specific purposes.

| | Balance at 1 Apr 2017 £'000 | Income £'000 | Expenditure £'000 | Transfers £'000 | Balance at 31 Mar 2018 £'000 |
|------------------------------|-----------------------------------|-----------------|----------------------|--------------------|------------------------------------|
| Atlas Beyond the Maps Appeal | 53 | 3 | (37) | - | 19 |
| Northern Ireland Fund | 1 | - | - | - | 1 |
| Dilys Breese Fund | 88 | 2 | (9) | - | 81 |
| Boddy & Sparrow Fund | 2 | - | - | - | 2 |
| Migration Fund | - | 1 | (1) | - | - |
| Nightingale Appeal | 16 | 35 | (24) | - | 27 |
| Owl Fund | - | 101 | (29) | - | 72 |
| Swallow Appeal | 8 | - | - | - | 8 |
| Young Scientists' Fund | 16 | 31 | (24) | - | 23 |
| Garden Research Fund | 68 | 10 | (6) | - | 72 |
| Out of Africa Fund | - | 17 | (89) | 72 | - |
| Thrush Fund | 1 | - | - | - | 1 |
| Farmland Birds Appeal | 70 | 1 | (23) | - | 48 |
| Curlew Appeal | 149 | 34 | (97) | - | 86 |
| Arctic Skua Fund | 29 | 29 | (38) | - | 20 |
| BTO Wales Fund | 42 | 7 | (4) | (1) | 44 |
| BirdTrack Fund | 20 | 2 | (18) | - | 4 |
| Sound Approach Fund | 180 | 60 | (89) | - | 151 |
| Tasso Leventis Fund | 50 | 52 | (16) | - | 86 |
| Ringers' Bursary Fund | 3 | - | (1) | - | 2 |
| Thorne Ringing Fund | 1 | - | - | - | 1 |
| | <u>797</u> | <u>385</u> | <u>(505)</u> | <u>71</u> | <u>748</u> |

17. UNRESTRICTED FUNDS

The income funds of the charity include unrestricted funds comprising the following balances:

| | Balance at 1 Apr 2018 £'000 | Income £'000 | Expenditure £'000 | Other Gains /(Losses) £'000 | Transfers £'000 | Balance at 31 Mar 2019 £'000 |
|---------------------|-----------------------------------|-----------------|----------------------|-----------------------------------|--------------------|------------------------------------|
| Birds in Trust fund | 2,327 | 1,167 | (398) | 15 | (519) | 2,592 |
| General funds | 498 | 4,851 | (5,171) | 19 | 340 | 537 |
| | 2,825 | 6,018 | (5,569) | 34 | (179) | 3,129 |
| Pension reserve | (3,504) | - | (241) | (62) | 125 | (3,682) |
| | (679) | 6,018 | (5,810) | (28) | (54) | (553) |

The Birds in Trust fund is to provide long-term funding for BTO projects. Income from legacies is credited to this fund unless the wills provide otherwise. £519k was transferred to General funds in respect of the JNCC Partnership. £54k was transferred to restricted funds in respect of specific donations. £125k was transferred from General funds to the Pension reserve in respect of the pension deficit repair payment. Other pension reserve movements are disclosed in Note 21.

| | Balance at 1 Apr 2017 £'000 | Income £'000 | Expenditure £'000 | Other Gains /(Losses) £'000 | Transfers £'000 | Balance at 31 Mar 2018 £'000 |
|---------------------|-----------------------------------|-----------------|----------------------|-----------------------------------|--------------------|------------------------------------|
| Birds in Trust fund | 2,507 | 750 | (320) | 1 | (611) | 2,327 |
| General funds | (296) | 4,606 | (4,974) | 744 | 418 | 498 |
| | 2,211 | 5,356 | (5,294) | 745 | (193) | 2,825 |
| Pension reserve | (3,371) | - | (93) | (162) | 122 | (3,504) |
| | (1,160) | 5,356 | (5,387) | 583 | (71) | (679) |

18. ANALYSIS OF GROUP FUNDS ACROSS NET ASSETS

As at 31 March 2019

| | Fixed Assets £'000 | Investments £'000 | Current Assets less Total Liabilities £'000 | Defined Benefit Pension Liability £'000 | Total Net Assets £'000 |
|---------------------------|--------------------------|----------------------|---|---|------------------------------|
| Unrestricted Funds | | | | | |
| Birds in Trust fund | - | 166 | 2,426 | - | 2,592 |
| General funds | 1,923 | 206 | 2,090 | (3,682) | 537 |
| | 1,923 | 372 | 4,516 | (3,682) | 3,129 |
| Pension reserve | - | - | (3,682) | - | (3,682) |
| | 1,923 | 372 | 834 | (3,682) | (553) |
| Restricted Funds | - | - | 698 | - | 698 |
| Total | 1,923 | 372 | 1,532 | (3,682) | 145 |

As at 31 March 2018

| | Fixed Assets £'000 | Investments £'000 | Current Assets less Total Liabilities £'000 | Defined Benefit Pension Liability £'000 | Total Net Assets £'000 |
|---------------------------|--------------------------|----------------------|---|---|------------------------------|
| Unrestricted Funds | | | | | |
| Birds in Trust fund | - | 284 | 2,043 | - | 2,327 |
| General funds | 1,914 | 353 | 1,735 | (3,504) | 498 |
| | 1,914 | 637 | 3,778 | (3,504) | 2,825 |
| Pension reserve | - | - | (3,504) | - | (3,504) |
| | 1,914 | 637 | 274 | (3,504) | (679) |
| Restricted Funds | - | - | 748 | - | 748 |
| Total Funds | 1,914 | 637 | 1,022 | (3,504) | 69 |

19. RECONCILIATION OF NET INCOME/(EXPENDITURE) TO NET CASHFLOW FROM OPERATING ACTIVITIES

| | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|---|------------------------|------------------------|--------------------------|--------------------------|
| Net income/(expenditure) per Statement of Financial Activities | 138 | (149) | 138 | (149) |
| Adjustments for: | | | | |
| Investment income | (1) | (1) | (1) | (1) |
| Depreciation | 30 | 37 | 29 | 36 |
| Net interest on defined benefit pension plan liability | 241 | 93 | 241 | 93 |
| Gains on investments | (34) | (2) | (34) | (2) |
| Profit on disposal of tangible fixed assets | (3) | - | (3) | - |
| (Increase)/decrease in stocks | 18 | (131) | - | - |
| (Increase)/decrease in debtors | (649) | 340 | (654) | 284 |
| Increase/ (decrease) in creditors | 248 | (93) | 272 | (47) |
| Pension deficit repair payment | (125) | (122) | (125) | (122) |
| Net cash inflow / (outflow) from operating activities | (137) | (28) | (137) | 92 |

20. FINANCIAL INSTRUMENTS

The carrying amounts of the group's and the charity's financial instruments are as follows:

| | Group 2019 £'000 | Group 2018 £'000 | Charity 2019 £'000 | Charity 2018 £'000 |
|---|------------------------|------------------------|--------------------------|--------------------------|
| Financial assets | | | | |
| Measured at fair value through net income/expenditure: | | | | |
| Fixed asset listed investments (Note 10) | 372 | 637 | 372 | 637 |
| Equity instruments measured at cost less impairments: | | | | |
| Fixed asset unlisted investments (Note 10) | - | - | - | - |
| Debt investments measured at amortised cost: | | | | |
| Trade and contract debtors (Note 12) | 643 | 545 | 459 | 243 |
| Amounts due from group undertakings (Note 12) | - | - | 551 | 665 |
| Accrued income (Note 12) | 641 | 180 | 611 | 125 |
| | 1,284 | 725 | 1,621 | 1,033 |
| Financial liabilities | | | | |
| Measured at amortised cost: | | | | |
| Trade creditors (Note 13) | 297 | 255 | 290 | 236 |
| Other creditors (Note 13) | 56 | 57 | 52 | 49 |
| Accruals (Note 13) | 93 | 91 | 89 | 87 |
| | 446 | 403 | 431 | 372 |

21. PENSIONS

Defined contribution pension plan

The Trust operates a Group Self-invested Personal Pension Scheme run by Aegon. Staff contribute to the Aegon scheme at a minimum rate of 5% of salary, and the BTO contributes at a flat rate of 11%. The Trust made contributions of £352k during the year (2018: £333k).

Defined benefit pension scheme

The Trust's defined benefit pension scheme, a final salary scheme, is closed. A full actuarial valuation of the scheme was carried out as at 1 April 2018. At that date the assets were valued at £10,611k and the liabilities at £15,014k, giving a net deficit of £4,403k and a funding level of 71%. A deficit recovery plan was subsequently agreed between the Board and the pension fund trustees, by which the shortfall would be made good by annual lump sum deficit repair payments spread over the years to 2033.

For the purposes of the group financial statements a separate valuation is carried out at the balance sheet date by a qualified independent actuary in accordance with Financial Reporting Standard 102 (FRS 102). The amounts recognised in the statement of financial activities for the year were as follows:

| | 2019 £'000 | 2018 £'000 |
|---|---------------|---------------|
| Recognised in: | | |
| Expenditure: | | |
| Interest income | 296 | 299 |
| Interest cost on liabilities | (392) | (392) |
| Net interest on net defined benefit liability | (96) | (93) |
| Past service cost in respect of Guaranteed Minimum Pension (GMP) equalisation | (145) | - |
| | (241) | (93) |
| Other recognised gains/(losses): | | |
| Actual return on scheme assets (excluding interest income) | 213 | (162) |
| Actuarial (loss) on liabilities | (275) | - |
| | (62) | (162) |

The amount recognised in the balance sheet was as follows:

| | 2019 £'000 | 2018 £'000 |
|--|----------------|----------------|
| Fair value of scheme assets | 11,007 | 10,598 |
| Present value of defined benefit obligations | (14,689) | (14,102) |
| Defined benefit pension scheme liability at 31 March | (3,682) | (3,504) |

Reconciliation of funded status:

| | 2019 £'000 | 2018 £'000 |
|--|----------------|----------------|
| (Deficit) at 1 April | (3,504) | (3,731) |
| Employer pension deficit repair payment | 125 | 122 |
| Net interest on net defined benefit liability | (96) | (93) |
| Past service cost in respect of GMP equalisation | (145) | - |
| Remeasurement (loss) | (62) | (162) |
| (Deficit) at 31 March | (3,682) | (3,504) |

NOTES TO THE CONSOLIDATED ACCOUNTS (CONTINUED)

21. PENSIONS (Continued)

Changes in the fair value of the pension scheme assets were as follows:

| | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Fair value of scheme assets 1 April | 10,598 | 10,897 |
| Interest income | 296 | 299 |
| Actual return on scheme assets (excluding interest income) | 213 | (162) |
| Employer pension deficit repair payment | 125 | 122 |
| Benefits paid to members | (225) | (558) |
| Fair value of scheme assets at 31 March | <u>11,007</u> | <u>10,598</u> |

Changes in the defined benefit obligations were as follows:

| | 2019 £'000 | 2018 £'000 |
|--|-----------------|-----------------|
| Present value of defined benefit obligations at 1 April | (14,102) | (14,268) |
| Interest cost on liabilities | (392) | (392) |
| Benefits paid | 225 | 558 |
| Past service cost | (145) | - |
| Actuarial (loss) | (275) | - |
| Present value of defined benefit obligations at 31 March | <u>(14,689)</u> | <u>(14,102)</u> |

The amount of each major class of pension scheme assets within the total fair value of the scheme assets was as follows:

| | 2019 £'000 | 2018 £'000 |
|-----------|---------------|---------------|
| Bonds | 5,240 | 4,227 |
| Equities | 5,396 | 6,065 |
| Annuities | 237 | 251 |
| Cash | 134 | 55 |
| | <u>11,007</u> | <u>10,598</u> |

The total return on scheme assets was as follows:

| | 2019 £'000 | 2018 £'000 |
|--|---------------|---------------|
| Interest income | 296 | 299 |
| Actual return on scheme assets (excluding interest income) | 213 | (162) |
| Total return on scheme assets | <u>509</u> | <u>137</u> |

The principal actuarial assumptions used were as follows:

| | 2019 | 2018 |
|---|------|------|
| Discount rate | 2.5% | 2.8% |
| Rate of increase in pensions in payment | 3.6% | 3.6% |
| Rate of increase in pensions in deferment | 2.3% | 2.3% |
| Inflation assumption | 3.2% | 3.3% |

Average life expectancy, after retirement at age 65:

| | 2019 No of years | 2018 No of years |
|-------------------------------------|---------------------|---------------------|
| Male - as at the valuation date | 21.6 | 22.3 |
| Male - retiring in 20 years' time | 23.3 | 24.1 |
| Female - as at the valuation date | 23.2 | 23.8 |
| Female - retiring in 20 years' time | 24.4 | 25.1 |

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