

Bird Study in New Zealand

The Ornithological Society of New Zealand (Incorporated)

Fostering the Study, Knowledge and Enjoyment of Birds

The objects of the Society are: 1. To encourage, organise and promote the study of birds and their habitat use particularly within the New Zealand region. 2. To foster and support the wider knowledge and enjoyment of birds generally. 3. To promote the recording and wide circulation of the results of bird studies and observations. 4. To produce a journal and any other publication containing matters of omithological interest. 5. To effect co-operation and exchange of information with other organisations having similar aims and objects. 6. To assist the conservation and management of birds by providing information, from which sound management decisions can be derived. 7. To maintain a library of omithological literature for the use of members and to promote a wider knowledge of birds. 8. To promote the archiving of observations, studies and records of birds particularly in the New Zealand region. 9. To carry out any other activity which is capable of being conveniently carried out in connection with the above objects, or which directly or indirectly advances those objects or any of them.

The constitution states that the Omithological Society of New Zealand (OSNZ) shall have power to do all things which are incidental or conducive to the attainment of these objects. These include co-operating with other agencies or groups in matters concerning birds and sponsoring, organising and financing members, groups and expeditions for the study of birds in the New Zealand region.

Founded in 1939 the OSNZ was incorporated in 1953 and now has about 1000 financial members world-wide. A feature of OSNZ is the diversity of its membership, which ranges from professional ornithologists and government institutions in New Zealand and overseas through secondary and tertiary students and experienced amateur observers to learners and beginners. No special qualifications are required for admission and membership is open to all who are interested in birds.

OSNZ affairs are managed by an elected council of eleven, with powers to co-opt. A working structure has been created which provides for the maximum collection of information, minimum duplication of effort and maximum encouragement for new or inexperienced members who are keen to participate in Society activities. OSNZ has five permanent investigation schemes (Nest Record, Beach Patrol, National Wader Count, Moult Records and Recording of Observations) while many OSNZ members participate in the National Bird Banding Scheme. From time to time there are special inquiries on individual bird species and other national projects. For example from 1969 to 1980, OSNZ co-sponsored a New Zealand Bird Distribution Mapping Scheme which resulted in the production of a definitive *Atlas of Bird Distribution in New Zealand*. A new national bird mapping project is being considered in the near future. All these schemes and special inquiries are co-operative efforts - every member who wishes to do so may contribute information. Individual members or groups who plan to undertake particular studies can call on Council for help or advice. An OSNZ Field Investigation Officer is available to give advice on the design of projects and to provide names of helpful contacts.

In the past, Field Study Courses have been held as summer or Easter camps. There have also been summer camps for Junior Members. These courses are to be run more frequently in the future. They provide the opportunity for new members to get experience in the study of birds with expert trainers and are a great way to explore new areas and make friends. The Annual Conference and General Meeting, held in May or June, includes a Scientific Day where members report on bird projects, and a selection of field trips. AGMs are always great places to meet fellow birding enthusiasts from around the country.

The national schemes are supplemented by regional activities. Regional Representatives (RR) are elected annually by the members who live in that region. The RR is generally an experienced field ornithologist and a good organiser. The nature and extent of regional activity varies, depending on geography, scope for field work, keenness of local members, energy and enthusiasm of the RR. Several regions, especially those in the main population centres, arrange regular monthly meetings and outings; others meet when opportunity occurs. RR's are in a position to advise members and help them make local contacts.

The aim of OSNZ is to create a nation-wide study group with individual members or groups working on different aspects of ornithology as suits their interests or circumstances and all contributing to the sum of ornithological knowledge. This aim cannot be achieved in a day or a decade but each year brings a variety of new accomplishments and insights into the biology of birds.

A close liaison has been created and maintained between OSNZ and museums, the Department of Conservation, universities, kindred societies in New Zealand and overseas, and other organisations interested and engaged in the study of birds.

In 1990, OSNZ hosted the 20th International Ornithological Congress. This was held in Christchurch and 1303 participants arrived from 63 countries. The Congress was not only the largest ornithological event to have been held in New Zealand, but was one of the largest conferences ever held in Christchurch. The Congress marked a pinnacle of OSNZ achievement and coincided with the 50th anniversary of the Society.

OSNZ publishes quarterly its own scientific journal, *Notornis*. This journal has a wide circulation within New Zealand and overseas, and is provided to all members of OSNZ. A stock of back numbers is available for those who wish to acquire them. All OSNZ members are encouraged to publish original papers or short notes in *Notornis*, based on observations or studies of birds within New Zealand or the South Pacific. A news magazine, *OSNZNews*, is also published quarterly. This provides a forum for members to report back on trips, society schemes, interesting bird sightings and to advertise coming trips, meetings and events.

Every 10-20 years a Checklist is published of New Zealand birds. This is the official register of all birds accepted as part of the New Zealand avifauna. The third edition *Checklist of the Birds of New Zealand* was published in 1990 and copies can be purchased from the Membership Secretary. The *Field Guide to the Birds of New Zealand*, written and illustrated by members of the Society and published in 1996 by Penguin and Viking Books/Oxford University Press, is an important contribution to New Zealand ornithological literature and an invaluable guide to all active members. Other publications produced by the Society include *Fifty Years of Bird* *Study in New Zealand*, published in 1990, which is an index to *Notornis* (1939-1989) and *A Flying Start*, also published in 1990, which commemorates fifty years activity of the Ornithological Society of New Zealand.

Other services to members include an ornithological library, built up by purchase or donation of books and reprints and by exchange with leading overseas journals. Members may borrow from the library on application to the OSNZ Librarian. An extensive photographic slide collection is also being compiled by donations of slides from members. These are available for borrowing from the OSNZ slide librarian. A fee to cover postage is required for both library services. The address for these services is found in *Notornis*.

NEST RECORD SCHEME

The object of the scheme is to provide abundant and comprehensive data on length, time and peak of breeding seasons, clutch size, number of clutches, incubation and fledgling periods, nest sites and materials used in nest building. Hundreds of cards are needed before a valid analysis can be attempted for any one species and hundreds more to confirm results of the first analysis and show what variations occur between seasons or between districts.

All members of OSNZ can take part in the Nest Record Scheme, and non-members may complete cards provided their accuracy is guaranteed by signature of a member. Especially for young enthusiasts, nest recording is a most rewarding activity. Those who find only a few nests can be assured that their contribution, though limited, is welcome and valuable. By April 1997, 24,122 cards had been contributed to the scheme, covering 144 species. Information from nest record cards was used in compiling the breeding sections in the new Field Guide. More cards are needed, however, to fill in gaps in our knowledge.

Notes for Guidance of Nest Recorders

Cards can be obtained from the organiser or through RR's. There are only two types of card - individual nest cards and colonial nest cards (for use at colonies of gulls, terns etc.). The cards are easy to fill in, but directions printed on the card should be carefully read and followed.

Remember that cards are wanted for all species, native or introduced, rare or common. Do not confine your recording to nests which appear unusual or specially interesting. *Record all nests in which it has been possible to count the contents accurately at least once.* With hole-nesting birds accurate counts may be impossible, but record (if known) the date of laying, hatching or young leaving the nest. Cards are *not* required if a nest seen only once has not been laid in, or is apparently deserted. Begin your search for nests in early spring and continue through the whole nesting season. Too many records from the early, easy part of the season and too few from the later, more difficult period could falsify the final analysis. Remember that some species of seabirds nest in the autumn or winter.

If nest records are written up for publication, cards should still be sent in to the organiser. The value of a record is, of course, increased if a series of visits can be made to the nest, covering the whole breeding cycle. Much information can be gained from a limited number of planned visits, e.g. (for passerine species) two afternoon visits in the egg-laying period, to get date of first egg and egg laying sequence; two during incubation, to determine clutch size; two at hatching time, one when the young are 7-8 days old; one just before fledging and occasional visits thereafter to see if the young are still in the nest.

If so many visits are not possible, try to visit at least once before the clutch is complete, once after completion of the clutch and once when the young have hatched. If eggs and young are together in the nest, state whether young are hatching or eggs obviously addled. An estimate of age of nestlings or state of plumage development is worth recording. If you have accurate scales and callipers, weigh the chicks and measure the wing length.

If you find a nest containing a cuckoo egg or nestling, fill in the "species" space on the card thus -Cuckoo (Grey Warbler); do not complete a separate card for the host. Enter the number of eggs or young of the host plus the cuckoo egg or nestlings thus - 4 plus 1 equals four eggs of the host and one of the cuckoo.

Do not disturb nesting birds unnecessarily. Make your visits as brief as possible, so that eggs or chicks are not left untended or exposed to hot sunlight for long periods. Avoid breaking or damaging vegetation close to the nest; try to conceal your tracks through long grass, etc. Use a mirror fixed to a stick to inspect high nests.

Make absolutely sure that your identification is correct. Be careful not to record guesses or opinions as fact. Do not write "deserted", "robbed", "chicks flown" etc., without briefly stating the evidence for your opinion. Check your cards and send in before 1 March each year.

BEACH PATROL SCHEME

New Zealand is an insular country with a long coastline at right angles to the prevailing winds. Surrounded by both sub-tropical and sub-antarctic water zones, it is the breeding centre for 78 species of seabird and lies in the path of seabirds moving eastward in the non-breeding season (winter) from the southern Atlantic and Indian Oceans. Seabirds can be studied from ships but are often impossible to accurately identify at sea, so analysis of dead birds washed up on the world's coasts remains one of the main ways of studying seabird movements throughout the year. New Zealand is geographically well placed for this work.

The OSNZ Beach Patrol Scheme started in 1951 and since 1961 a summary of each year's results has appeared in Notornis. The aim is to record systematically the seabirds found dead on New Zealand beaches. Infrequent or opportunistic patrols may result in a few specimens of rare birds being sent to museums and the occasional recovery of a banded bird, but regular patrols provide these benefits in greater degree and also gather information of great scientific value. Their results establish and confirm what species of seabirds occur in New Zealand waters, and accumulate information leading to an understanding of their distribution, abundance, seasonal or annual movements and migrations. Data can be accumulated towards investigation of the causes of seabird deaths on New Zealand coasts, particularly in the case of 'wrecks'.

A 'wreck' is a period of exceptionally severe mortality, sometimes involving mainly one species, or at other times several species. Some 'wrecks' seem to be caused by storms catching young birds a few days after leaving their nests, others by storms combined with food shortage. In some overseas seabird 'wrecks', the cause of death has been attributed to avian disease, biotoxins or pollutants. Accurate records of the extent and frequency of 'wrecks', the condition (and weight) of birds and the weather which accompanies them can provide a better understanding of their causes.

Notes for Guidance of Beach Patrollers

A beach patrol is a walk along the high tide line of a beach to find, identify and record what birds have been washed ashore. All birds should be removed from the beach during each patrol to prevent the same birds being reported by another patroller. Patrols may occur at any time of the year and after any weather, though highest mortalities often occur after storms with onshore winds, especially in winter. Exposed beaches yield more results than land-locked harbour beaches.

Opportunistic patrols are valuable and should be recorded, but regular patrols yield a greater volume of information, and in some districts are organised by groups of members taking turns to do a monthly or fortnightly patrol of suitable beaches. In 1996, regular monthly beach patrols were carried out in Northland, Auckland, South Auckland, Waikato, Hawkes Bay, Wellington and Southland.

Beach patrol and specimen record cards can be obtained from the scheme organiser or RR's. **The beach patrol card** provides space for recording all species obtained and the number of each species found, so that an assessment of relative abundance of species can be built up over the years; the length of beach covered by the patrol, so that it is clear whether there has been significant or average mortality, and so that the abundance of species per kilometre can be compared with that for other regions and other years; the freshness of specimens, age group of specimens (if known) and weather conditions prior to the patrol, so that the effect of weather on mortality patterns can be studied.

If no birds are found, a beach patrol card should still be filled in, with a NIL return. It is just as important to know when and why birds are **not** washing up on beaches, as it is to know when and why they are being found ashore.

Specimen record cards provide space for recording age, sex, state of plumage, weight and measurement of individual birds. Such information, if carefully recorded, is valuable for future analysis. Only fresh specimens are worth weighing, and all sand and excess water should be shaken out of the plumage. Specimen record cards are *additional* to beach patrol cards; the latter should be filled in for every patrol, the former only if a specimen has been measured or the skin, skull or skeleton preserved.

When filling in cards, use either the full generic and specific name of the bird as per the latest *Checklist of the Birds of New Zealand* or use the appropriate common name as per the *Field Guide to the Birds of New Zealand*. Don't use vague or ambiguous names, e.g. BBG, muttonbird, little penguin. Cards should be filled in as soon as identifications have been checked, and sent to the scheme organiser before 1 March each year.

Collection and retaining of corpses is legal only in the case of seabirds that have died from natural causes or been accidentally killed, and then only when the collector has obtained a permit issued through one of the main museums. The beach patrol scheme organiser will tell you how to apply for a permit.

Accurate identification of birds found is absolutely essential, and not always easy. Beginners should find out who else does beach patrols in the area and who is the nearest authority to confirm their identification. In districts where regular patrols are done, a beginner can learn much by joining them and getting instruction in diagnostic characters from an experienced patroller.

Beginners should also learn and practise the standard method of measuring and weighing birds. If noone locally patrols beaches, then contact the beach patrol scheme organiser for advice on what to do with birds that can not be identified. In the meantime, place all retained corpses in a deep freezer until they are identified by an expert. Wrap the corpse thoroughly in sealed plastic bags and attach a note or label to each corpse stating the name and address of the collector, date collected, name of the beach and any other relevant details. When patrolling, do not rely on memory. Carry a sack or plastic bags to collect specimens you cannot identify; collect at least the head of unknown specimens - in most cases this is sufficient for identification - and bear in mind that museums are always keen to obtain fresh specimens or dried corpses of unusual species. Once you can identify with certainty the commoner species, few birds will need to be collected. However, all birds should be removed from the beach; place easily identified birds up in the dunes.

If you are interested in beach patrol work, do not be discouraged if no regular patrolling is done in your area. Work on your own if you have to, but make arrangements to have your identifications checked. Many parts of New Zealand's long coastline are not patrolled adequately, or at all. This aspect of bird study can be rewarding and exciting, and every beach patrol carried out adds to the value of the scheme. Up to April 1997, 23,570 cards have been contributed to the beach patrol scheme.

NATIONAL WADER COUNT

The distribution and abundance of wading birds has been studied in New Zealand since the formation of OSNZ. At selected sites such as Firth of Thames and Manukau Harbour, annual locality counts provided a census of wader flocks both in summer and winter. In 1983, it was decided to extend these counts to all the major estuaries and harbours in New Zealand. Flocks of waders were counted annually in November and June. This provided information on the numbers of Arctic migrants that summered in New Zealand and how many remained over the winter. It also enabled counts of New Zealand waders that formed flocks in the winter, e.g. South Island Pied Oystercatcher, Wrybill and Pied Stilts. The national wader counts were conducted at all sites until 1996. Today the counts are continuing at a selection of key sites to monitor long-term trends in the wader populations. Results of wader surveys have been published in OSNZNews and full reviews will be published in Notornis.

MOULT RECORDING SCHEME

The moult recording scheme was launched in 1981. The aim of the scheme is to collect information on the moult patterns of all New Zealand bird species. Moult of body and flight feathers is generally undertaken every year by birds, although some seabirds spread their moult over several years.

The main information sought is the pattern and timing of wing and tail moult, although moult of other body feathers can also be recorded on the Moult Cards. Moult recording may initially appear quite complicated and it does help to have somebody demonstrate how the wing and tail feathers are counted and how to score moult. Also knowing how may feathers there should be on the wing and tail of a particular species is a great help. With practice and assistance from experienced ornithologists, moult recording becomes relatively easy. Opportunities to collect moult information include finding dead birds on beaches or road-sides, or when birds are caught for banding.

Moult is a critical time in the life of birds and determining when it occurs, how long it takes to complete and how many wing or tail feathers are lost at one time are essential in understanding the vulnerability of a species during moult. For many New Zealand birds, we have very little information on their moulting cycle and moult cards are needed for all species.

RECORDING SCHEME

The recording scheme started in 1940. Miscellaneous field records sent in by members, but not suitable for publication as Short Notes in *Notornis* were summarised and published once a year under the heading Classified Summarised Notes (CSN). This scheme was stopped in the 1960s, but was reactivated in the 1970s. Today, regional recorders prepare a summary of observations from each region and these are sent to the North Island and South Island compilers to prepare CSN for *Notornis*.

Regional recorders use a set of guidelines to select observations that are suitable for national publication. There is however a wealth of local information that is worth extracting from notebooks and storing in regional archives. Information to be sent to regional recorders includes unpublished locality lists, unusual distribution records, bird counts especially of waders and nesting seabirds, observations on foods eaten by birds, dates when first and last songs of passerines are heard each year, movements and migrations of seabirds, waders and cuckoos, behaviour of birds including flocking and roosting patterns, causes of mortality and locations of any seabird colonies. However, all information on nests, moult and beached birds should be placed on the appropriate cards and sent to scheme organisers or RR's.

Some regions provide recording books at monthly meetings where members can record their observations. Otherwise members should extract information from notebooks and send it directly to their regional recorders. The CSN year runs from 1 July to 30 June. Before or soon after 30 June members should make sure that all observations that they wish to include in CSN have been sent to regional recorders. These need to be sent no later than 31 July each year.

It is important to extract as much useful information as possible from field notebooks, diaries and files. These may be lost, mislaid or destroyed. The Recording Scheme also provides a repository for notebooks if members leave the Society or become inactive at some stage of their life. If members so choose, they should inform family members or place instructions in their will that they wish their notebooks to be made available to the Society after they pass away.

THE NEW ZEALAND NATIONAL BANDING SCHEME

In many countries around the world bird banding (ringing), and marking of animals in general, is regarded as one of the most essential research tools for biologists. Although historically the marking of animals goes back to the Greeks and Romans, the systematic use of marking methods for birds was not initiated until about 1899, when the Danish ornithologist H C Mortensen used individually numbered leg bands in his studies. This was soon taken up by others, and led to the development of national banding schemes in many countries.

In the first few decades of this century some New Zealand researchers, realising the potential of banding and marking techniques, started to make up their own bands, from cigarette tins, aluminium pots or other materials, cut up and engraved with numbers. These methods, however, were soon regarded as unsatisfactory and by the late 1940's, when the scale of banding increased, a national scheme was proposed. In 1950 the OSNZ organised a scheme, using the then Dominion Museum for its return address. Meanwhile, the Wildlife Branch of the Department of Internal Affairs had been banding game birds since 1947, using the Department's address on their bands.

Initially both schemes operated beside each other, with the Wildlife Branch banding game birds, the OSNZ all other native and introduced species. The OSNZ scheme was run initially on an honorary basis, but the growth in the number of birds banded each year, as well as the increasing cost of running the scheme, proved too much for the Society. In 1962 an offer from the Dominion Museum to take over the running of the scheme was gladly accepted.

In 1967 both schemes were merged to become the New Zealand National Banding Scheme. The administration was undertaken by the Wildlife Branch (later to become the Wildlife Service) of the Internal Affairs Department until, in 1987, the responsibilities of the Wildlife Service were incorporated in the newly created Department of Conservation.

The merger of the two schemes facilitated a professional administrative approach to all banding, and methods for more sophisticated data handling and analysis. The New Zealand scheme became one of the first in the world to take advantage of computer technology.

Over the years the banding scheme has flourished. The moderate numbers of birds banded

annually in the early days have increased steadily to an average of 20,000 - 25,000 birds a year, with a present total of over 1.2 million birds banded. The computer system presently holds recovery records for some 170,000 individuals and more than 270,000 records when live repeat recoveries are included.

To band or mark animals they must first be caught. Where this applies to birds, there are many capture techniques available. The more commonly used methods are traps (either self operated, like drop traps, or those triggered mechanically, or by hand), mist nets and hand capture. Methods like cannon nets, where a net is propelled by projectiles to land over a flock of roosting birds such as waders, require special skills and are not widely used.

Some 23 different band sizes are available, with internal diameters ranging from 2 to 22 mm. Most bands are designed to be round when closed round the leg, but there are several specially designed bands. Some are oval and used on birds with 'flat' legs, like shearwaters. Penguins cannot be banded on the legs as these are feathered and stubby, so bands are designed to fit around the base of the flipper.

Each band has its own prefix (which also denotes the size), an individual serial number and a return address. This facilitates the unique identification of each banded bird.

Early on, most bands were made of aluminium, aluminium alloys or monel, but now most are made from stainless steel except for the smallest sizes. Stainless steel (New Zealand pioneered the use of it!) has the advantage of being very hard, thus alleviating most problems with wear or corrosion experienced with other metals.

The use of colour bands is widespread in many modern bird studies. These allow for remote observations of individuals in a study population without the necessity for frequent recapture, thus minimising disturbance. Sometimes the same single colour or combination is used on a number of individuals within a population. In this case the colours indicate a year class or locality group.

Internationally, the controlled use of coloured leg flags (basically colour bands with a piece sticking out like a miniature flag) has been developed. Each participating country has its own regional colour (white for New Zealand). This technique helps to establish the flyways for migrating waders.

An increasingly popular tool, used in conjunction with leg bands, is a radio transmitter (sometimes combined with data logging sensors) which enables the marked bird to be tracked from the ground for short distances or internationally by satellite. Though expensive, the results obtained allow detailed tracking of an individual throughout the life of the battery, often in areas where banding recoveries would be impossible.

Bird banding and marking techniques in New Zealand have supported the study of over 200 different species. For most of these species, data on seasonal movements, ecology and behaviour, dispersal, survival and mortality, longevity etc. are still accumulating.

The New Zealand National Banding Scheme and any study it facilitates, to be successful, depends on recoveries. These come from three main sources: birds found dead, birds recaptured, and birds identified from their colour combination or by reading the metal band number with the help of binoculars or a telescope.

Members of OSNZ should be aware of the importance of recoveries and sightings, as well as the procedure to report them.

- 1. If the banded bird is dead, remove the band, flatten it and return with details of the finder to the Banding Office; state when and where found and any other details, including the cause of death if known.
- 2. If the banded bird is recovered alive, carefully record the band number, release the bird still wearing its band, and report to the Banding Office with all available details.
- **3.** If you see a banded bird and can read the band number or colour combination with binoculars or a telescope, read the complete number (or combination) twice, write it down immediately and report it. If there is any doubt about the accuracy of the record, disregard it. Do not guess what you cannot clearly see.

Notes:

- Date, exact locality and finding circumstances are essential. The more detailed the information the better.

- Never remove a band from a living bird. It may be recaptured again in the future and add further data to the scheme.

- **Colour combinations**. These should be reported in order of *left leg* - top to bottom, *right leg* - top to bottom. Be aware that in some species bands may be on either (or both) tibia and tarsus. Please include this information where applicable.

Where band numbers are read with the help of binoculars or a telescope, read the number twice and record it immediately. Note that whenever there is doubt about the accuracy of an observation, do not guess, but disregard it. Forward any information and bands to:

> New Zealand National Banding Scheme Department of Conservation P O Box 10420 Wellington.

Bird banding in New Zealand is restricted to those persons holding a valid permit to trap, band and handle birds, issued through the Banding Office by the Department of Conservation. Two types of permit exist. Personal, which allow an individual to band, and Institutional/group permits. The latter are vested in the name of one person, who in turn has the authority to authorise others to work under the permit provided these people are suitably trained to carry out the work. All permits are valid for a limited duration and restricted to specified species, trapping methods and localities.

To become a banding operator (bander) an application must be lodged with the Banding Scheme. Applicants must be members of OSNZ or a recognised scientific institution, and over 16 years of age. Application forms are available from the Banding Office and must state previous experience, details of the project, methods of catching/trapping and details of the need for any special markers. A committee, including the OSNZ Banding Liaison Officer, evaluates each application for merit.

Conditions of a permit include strict adherence to any rules of conduct and methods set down, as well as a regular return of records to the Banding Office. Further information on the scheme can be obtained from the Banding Office.

NOTES FOR NEW MEMBERS

Subscriptions are payable at the time of application for membership and on or before 1 January thereafter. Members joining at any time during a calendar year receive all that year's issues of *Notornis* and *OSNZNews*. Names and addresses of office bearers, RR's, scheme organisers and librarians are listed in *Notornis*.

For further information about the Society write to the Secretary, Ornithological Society of New Zealand, P.O. Box 12397, Wellington. For information about local activities, meetings and field trips, contact your RR.

The structure of OSNZ and its organised activities have already been outlined. The following suggestions may assist you in your personal bird watching.

STUDYING BIRDS

The basic requirements are simple enough - a real interest in birds, an inquiring mind, a keen eye and a field notebook and pencil. Binoculars (preferably lightweight 8x30 or 7x50) are also essential for the serious bird watcher. To identify birds and know what to look for you will need a good guide book. The *Field Guide to the Birds of New Zealand* by Heather & Robertson (1996) is probably an essential purchase. As time goes on you will use books more and more, but books are no substitute for personal observation. One of the greatest pleasures of bird watching is the satisfaction of finding things out for yourself. The test of good bird watchers is their ability to observe closely, record accurately what they have seen and inform others.

Much can be done without going far afield. Get someone to help you make a list of the birds that occur in your region or you can purchase a copy of the Atlas of Bird Distribution in New Zealand by Bull, Gaze & Robertson (1985). By comparing the distribution of birds with information on their habits from the Field Guide, you can establish where birds might be found and then go out and look for them. All bird watchers spend their first few months or even years becoming familiar with the common birds in their region. Watch them closely and try to find out all you can about their habits and habitat use; learn to recognise their songs and call notes, find out where they roost, where they nest, how they feed, whether they flock in winter, what local movement takes place in different seasons. By studying common birds you will improve your bird watching skills and become more proficient at spotting rare or unusual species.

Once you have got to know your local birds you can begin to actively participate in serious bird study. By keeping good records you can contribute, along with other observers, to valuable national projects or you can start individual studies.

Good note-taking is an art which has to be learnt. The golden rules are - write it down on the spot; never trust to memory; write too much rather than too little. The longer you delay recording information the more prone you are to forgetting important details (or worse, recording incorrect information). Consequently, the result may be worthless. Details which seem trivial at the time may turn out to be important later. Remember to note date (day, month and year), time, place, weather and names of any fellow birders. Always try to note actual numbers rather than use vague terms like "few", "many", "common". Develop a passion for truth; write down what you see and all you see, not what you would like to see or think you might have seen.

Besides your field notebook you will need some form of permanent record into which your important field notes can be transcribed. This may include writing down records onto national scheme cards such as beach patrol, nest record or moult cards. Some people transfer their field notes to a durable notebook or series of sheets or cards. Others store data on computer files. The important thing is to transcribe your field notes before you have forgotten what the abbreviations mean. Having a second copy also gives you peace of mind in the event of a disaster like having your notebook swept away by the tide or lost from your pocket while you are crashing around in thick bush.

When you see a bird you cannot identify, you may go far wrong if you merely jot down a few scrappy notes in the field, go home, look up a book and then write a description of what you saw. This is the time when really accurate field notes or photos are essential if you are to be certain of your identification.

How to Identify that Bird

Some basic steps need to be learnt to give you the confidence to record good descriptions of an unknown bird. Study a diagram which shows the parts of a bird and its plumage (see pages 14 -17 in the *Field Guide to the Birds of New Zealand* (1996). Learn by heart the terms used to describe a bird. Work out a method of describing a bird so that no detail is left out when you have to use it.

For example, initially note the approximate size, shape (including type of bill) and general colour pattern of the bird, in case it flies off or you only see it briefly. If the bird settles into a position where you can study it in detail, then note each feature carefully. Start by recording colour of bare parts, e.g. bill, iris, bare facial skin (if any), legs and feet, then describe the plumage. Start at the forehead and work down the upper surface of the bird as far as its rump; its wings (coverts and flight feathers); its upper tail coverts and tail, sides of head, under surface from chin to under tail coverts, and underwings. You may not be able to observe every detail, but if you work to a system you can be sure that nothing you do see is omitted from your notes.

Besides the actual description several other points are worth noting, especially if the bird turns out to be a rare species. Experienced ornithologists are rightly sceptical of visual records of rare birds; additional information included in your notes may aid identification and will in any case be evidence of good observation. Points to note, and where possible to compare with similar points of birds already well known to you, are size, form and structure (to include items such as size and shape of bill, length of legs, shape of wing, shape and length of tail); action and flight; call notes and song and their quality (harsh, rattling, shrill, hoarse, liquid, etc.). Be sure to note the exact position of any white or colour patches, and other markings. Do not confuse the terms "bar" and "stripe". Bars of colour run *across*, stripes run *along* the feathers. Make a sketch, however rough, to show details. Note also how far away you were from the bird; duration of observation; if binoculars used, what power; nature and direction of light during observation, any other condition such as strong wind or poor visibility which affected observation; whether you saw the bird from different angles, from above or below, wholly visible or partly obscured, at rest or in flight. Record the nature of the site, and what other birds, if any, were associating with your bird.

All this detail of description and note-taking may seem very complicated, but in fact it is a relatively simple routine. Try it out on birds you know, and after a little practice you will find that you can use the method on unknown birds with confidence. One important fact that emerges is - for best results, work in pairs rather than work alone. One person cannot watch and make notes at the same time; when two work together one can watch and call out the details, the other can write; by a changeover, observations can be checked and perhaps some extra details added, which had previously been missed.

If you do see a rare or unusual bird, make sure you report it to other ornithologists so that they might have the opportunity to confirm your sighting (and share in the joy of seeing a rare species). For the sighting to be accepted for publication or inclusion in the Checklist, you will need to fill in a Rare Birds Report. These can be obtained from your RR. Fill in all the details listed above and send to the Secretary, Rare Birds Committee (address in *Notornis*). The Rare Birds Committee is a group of ornithologists who are experienced in identifying birds and have expert knowledge of various bird groups. They will examine the Rare Bird Report and recommend whether or not it should be accepted.

Finally, remember that bird watching and bird study should be fun. There is a serious side to ornithology which requires accurate note-taking, but collecting that information should provide you with a life-time of challenges and fascinating experiences. Membership of OSNZ gives you the opportunity to participate in serious bird study or to simply enjoy bird watching with friends.

The Ornithological Society of New Zealand P O Box 12397 Wellington

Phone / Fax (Membership Secretary) (64) 09-294 8334 Email osnz1@ibm.net

Originally compiled 1966 by - A.T Edgar, B.D. Heather and C.J.R. Robertson Revised 1997 by - G.A. Taylor, R. Cossee and C.J.R. Robertson