

IOC 2006
Meeting of Committee on Bird Marking
August 13 2006, 09:30 – 17:00
Hamburg, Germany

Meeting Co-chairs: Fernando Spina (Italy), Charles M. Francis (Canada)

Additional Participants: Stephen Baillie (Britain and Ireland, EURING), Monica Tomosy (USA), Olaf Goiter (Germany), Kiyooki Ozaki (Japan), Przemyslaw Busse (Poland), Wojciech Kania (Poland), Kasper Thorup (Denmark), Jesper Johannes Madsen (Denmark), Dieter Oschadleus (South Africa), Douglas Harebottle (South Africa), Juan Arizaga (Spain).

Introduction:

Following a successful round-table at the 2002 IOC in Beijing, China, an all-day meeting was convened in conjunction with the 2006 IOC in Hamburg, Germany to bring together representatives from bird-ringing and bird-banding schemes from around the world. The goal of the meeting was to discuss issues of mutual concern, ways to improve communication and cooperation among programs, and the potential role of an IOC standing committee on bird marking. The meeting opened with a series of presentations by representatives of each of the ringing schemes present at the meeting. These were followed by more general discussion of certain topics of particular interest to many different schemes, as well as consideration of future directions for the committee. This report highlights some of the key issues discussed and conclusions of the meeting, though not in the order discussed.

1. Conclusions and Future Directions:

- The primary role of the committee should be to provide a forum for exchange of information and discussion, to enhance communication among people administering bird-marking schemes all over the world.
- The committee may also, at some point in the future, have a role in activities such as developing or promoting recommended standards (e.g. for data collection or data management) but there was a strong desire to keep it simple and minimize bureaucracy
- Everybody attending this meeting felt that it was very worthwhile to have in-person meetings at periodic intervals, to foster exchange of information and ideas among bird ringing/banding schemes. Each scheme has developed ideas and approaches that can potentially be useful to other schemes.
- The IOC provides a valuable opportunity to meet, but there is a need for more frequent communication than once every 4 years.
- It was suggested that a web site and electronic information exchange should be developed for regular communication. The BTO, which currently hosts the EURING website, offered to host such a site and this was accepted. Stephen Baillie explained that BTO were very happy to host the site and prepare the web pages but it would largely be up the members of the committee to supply the material.
- (Note: the new address (as of Oct 2006): <http://www.bird-marking.net/>)

- Potential information to be posted on the site includes:
 - summary information on each ringing scheme, including contact information (much of the contact information is already available on the EURING site, but additional information on the nature of each scheme such as the information requested in the recently circulated questionnaire to all ringing schemes, would be of considerable interest)
 - results of the questionnaire that was circulated by Fernando Spina about individual ringing schemes around the world (however, this should first be updated by soliciting responses from schemes that did not respond to the first call to participate)
 - a web forum/bulletin board/list server or some such similar service for people working with individual ringing schemes, to exchange information on new developments, new ideas, information needs, etc. This forum should be targeted to people administering ringing schemes, rather than general ringers, and postings should be limited to people representing individual ringing schemes.
 - a summary page which highlights key new developments from various schemes that may be relevant to others (and could provide links to more thorough discussions on a web forum)
- In addition, it was suggested that it would be useful to meet more often than once every four years. An efficient option would be to combine an international meeting of ringing schemes from around the world with the EURING general assembly, which meets every two years. The next such meeting is in Aug/Sept 2007 in Hungary. Pending approval of the Steering Committee for that meeting, representatives from non-EURING schemes could be invited to participate in that meeting, with additional sessions added to the meeting specifically to address issues that extend beyond EURING.

2. General Discussion

These notes are not intended to capture all issues discussed under each heading, but rather highlight some key messages. They are divided into two major headings: Bander training/certification/permitting, and Data Management

2a. Discussion: Training and Bander Certification

- training requirements and licensing procedures are highly variable among countries
- In many countries, trainees work through various levels of licences (e.g., from C level as lowest, up to A level representing a qualified trainer)
- Process may take up to 3 years to become a ringer
- In U.S. and Canada, there are no specific training requirements; instead, prospective banders are required to get testimonials from experienced ornithologists indicating they are competent at banding. There is thus a lot of variation in background, which sometimes causes problems. Efforts are being made to provide enhanced training materials and standards, but these are not (yet) reflected in permitting requirements.

- Some countries offer specific training courses intended for certification (e.g. in Africa), but can only enrol a limited number of participants. To enhance participation, SAFRING is looking to include ringing within natural resource management courses (colleges, universities, etc.)
- Suggestion was made that could recruit some retiring baby-boomers to run training courses as volunteers.
 - o Perhaps could even run through organisations like EarthWatch
 - o A lot of ringers in U.K. and elsewhere in Europe could probably be interested in running training courses as volunteers in Africa or other regions with fewer local ringers.
- In Japan, some problems with existing ringers who started before there were formal training requirements – not always up to standards. Also, many professionals want to use rings without a training course – attempting to control this.
- In some areas, and for some programs, there is a challenge with recruiting adequate participation. This is particularly so for projects like constant effort sites for monitoring demography and other detailed mark-recapture studies where the emphasis is on intensive study on small numbers of birds (e.g. to get capture histories). This means relatively few birds are captured compared with, for example, migration studies, and hence it is less exciting for ringers, though potentially much more valuable. Need processes to facilitate training.
- Training is becoming increasingly important in the context of animal welfare concerns, and public image. Need to ensure consistent standards, and minimize injuries and mortality for both scientific and ethical reasons.
 - o In Japan, banders are asked to report numbers of mortalities, although data are not input into database. Concern that reporting may not be accurate.
 - o In Denmark, ringers must report all mortalities by different capture methods – can help to inform different methods. Over last 8 years, mean mortality was 0.18%. Thought to be fairly realistic, as promised not to pinpoint individual ringers in any reporting.
- In Italy, permits are limited to particular trapping methods unless special training was received (standard licence would be mist nets or basic traps such as duck traps).
 - o Busse pointed out there is a lot of variation among mist nets, with thinner nets more likely to cause injury. Capture rate is a bit lower (about 20% lower) but cause many fewer injuries. They recommend thicker (higher denier) nets, especially for beginners.
 - o In Japan, standard is now 200 denier nets, which also have higher UV resistance
- Another challenge is related to data reporting:
 - Some ringers are not very prompt at reporting data.
 - in Japan some “famous professors” tend to “forget” to submit data
 - In U.S., permit is suspended if data are not submitted within 45 days after a request (e.g. if a bird was recovered for which data had not been submitted).

- Renewals are not processed until data are submitted
- In Britain and Ireland annual permit renewal -- will not be renewed if previous year's data are not submitted
- In Italy, new rings are not issued until existing rings are used up
 - Ringers inventories are accessible through a web site, so they can track what they are supposed to have.
- Training can also enhance value of biometrics and ancillary data:
 - Measurements for nestlings or recently fledged young can be useful to determine their exact age which provides information on hatch dates and is relevant to expected survival rates.
 - Ringers working on nestlings can also gather valuable information on nests, including nest success. This can be managed particularly easily in areas where ringing scheme is also run by an institute that manages nest record schemes or similar programs (e.g., BTO).
 - May be other opportunities for combining ringing with related bird research that could be explored.
 - examples of analyses of large sets of biometrics collected at a national ringing centre are available from the Italian RC.

2b. Discussion: Data Sharing and Data Management

- Various strategic questions we considered:
- Should we consider setting up systems for central storage of data from schemes in addition to those in EURING?
- How can increase efficiency of sharing data and programs
- How should one manage data from colour marking and newer technologies such as satellite tracking – should those data be part of the ringing scheme?
- The issues of data sharing are particularly relevant for intercontinental movements because mechanisms do not currently exist (see issues under AFRING presentation, below)
 - Relevant from an avian flu perspective for movements from North America to Europe/Asia
 - Many schemes in Europe currently maintain information on birds recovered in their country that were ringed elsewhere, in addition to information on birds ringed within their own scheme.
 - Such data are provided at regular intervals by cooperating schemes.
 - within EURING, national ringing centres send recoveries of birds ringed with their national rings to the centralized EURING Data Bank (www.euring.org/edb/index.htm)
 - Such a system could be expanded to North America and other schemes, but need to consider many issues related to coding systems.
 - Perhaps a future role for an international committee might be to help develop standardized coding systems (or at least, mappings among systems) to facilitate such exchanges electronically
 - Some of the potential sources of variation:
 - Place codes (e.g. countries/states, etc.):

- Species codes – a challenging area with continuous changes in taxonomy
- Sex codes – fairly easy
- Age codes – easily mapped among schemes if based on same criteria (e.g., calendar years as used in North America and EURING) but this type of system is not useful in countries where breeding season includes January and February (because a bird hatched on Dec 31 would require a different age code from one hatched on Jan 1, but the date would not be known).
- An alternative system of age codes for southern hemisphere and tropical areas has been proposed in Africa:
 - Jackson, C. 2005. Ageing Afrotropical birds in the hand: a revised new system. *Afring News* 34:60-67.
- As a minimum, should try to minimize number of different coding systems being used.
- Need flexibility to cope with different designs of ring numbers (e.g., all numeric as in North America or alphanumeric).
- It was pointed out that original letters reporting recoveries often have additional information that is not computerized.
 - If these were scanned and indexed through a data base (e.g., by ring number) it could be possible for researchers, even in different countries, to access these more readily if required (and would save storage space). However, not all schemes retain such documents in the long-term (e.g. Britain and Ireland) and many recoveries are now reported by phone or email.
- One challenge in the Americas is that the smaller North American band sizes have the address only on the inside of the band, so it would be difficult to identify rings to scheme if other schemes used the same design.
 - It was pointed out that smallest diameter in Europe is similar to that in North America, and all European rings have an address on the outside. Part of solution may be use of slightly smaller fonts and alphanumeric codes that require fewer digits on the smallest sizes.
- Data Ownership:
 - Some ringing schemes require ringers to sign an agreement that explicitly provides for joint ownership of data between scheme and ringer, or that provide ownership to scheme (e.g., Helgoland), but which allows ringer first rights to analysis and publication of data. With SAFRING, data are considered property of scheme unless ringer explicitly requests otherwise.
 - It was pointed out that when schemes were smaller, data ownership was less of an issue, because all ringing recoveries were published, and hence were accessible and could be cited.
 - A data request to the EURING databank requires consent of relevant countries before data are released. If some countries don't agree to a request, this can leave some major gaps in an analysis.

- Easier access might lead to risk that multiple people will occasionally work on same question on same data, but the far bigger problem with ringing data is that they are largely underutilized.
 - SAFRING hopes to make data available for download on web.
 - North American scheme is currently exploring options to facilitate data release. However, need to make sure that if raw ringing data are available on web, this will not cause people to stop bothering to report recoveries (because they can look up original data without reporting!)
 - Different schemes have very different scientific objectives and funding arrangements that determine their attitude to the release of data. Some have a purely administrative function and are keen for their data to be widely available and used. Others form a more integral part of research and monitoring programmes where priority is given to in house research outputs and use of the data in future research proposals. In the latter case many data may still be released but only when this does not conflict with the organizations core objectives. Such organizations often fund much of the ringing schemes operation from their own resources.
- Storage of data from resightings and other technologies
 - The BTO accepts colour-marking and resighting data if submitted, but does not require them for all classes of data. Standardized codes for recording the colour marks placed on birds now form a mandatory part of ringing data submissions. This will facilitate more comprehensive processing of colour-mark reports in the future.
 - Italy has been centrally storing all sightings as of ~15 years ago
 - Helgoland can only enter data if identified to a particular ring number. Ringer is responsible for dealing with all reporting sightings of birds they ringed. Also requires ringers to submit data from satellite-tracked birds. However, most other schemes are probably not in a position to require this.
 - Questionnaire, when posted, will give additional information on auxiliary marking from different schemes.
 - Data from radio-tracking or satellite tracking is a very different type of data that requires different strategies for storage (more complex than simply location/time information because may also include auxiliary data such as heart rates).
 - There was some ambivalence about role of ringing schemes in managing these data.
 - If want to remain relevant need to embrace new technologies
 - As tags get smaller, many more species will be involved in satellite tracking

3. Reports/presentations on individual schemes as well as EURING and AFRING

- the following notes highlight some of the key points made in each presentation, but are obviously not comprehensive. Additional information on each scheme is being gathered through the questionnaires and will be posted on the International Bird Ringing website when it is ready.

GERMANY – HELGOLAND (presented by Olaf Geiter)

- Olaf has just taken over running this scheme. His own research has focussed on introduced birds, especially waterfowl, but he also has training as a computer scientist.
- Recent main task is to improve data management, merging older data base (pre-1999) with new Oracle data base (2000) and incorporating all resighting-recapture data (which are currently not stored centrally).
- Developing procedure to deal with coordination and computerization of colour mark information
- Scheme currently rings ~100,000 birds per year of which ~10,000 are at Helgoland
- Currently actively researching bird movements in relation to modelling potential spread of avian flu

DENMARK (presented by Kasper Thorup)

- Kasper has been running scheme for ~1 year with about 50% of time allocated to administrative duties and 50% to research, though not necessarily with ringing data. Also has one full-time academic staff person, 3 part-time administrative staff
- Currently about 175 ringers, but discouraging ringers who are not active
- 50,000-70,000 birds per year with ~3000 recoveries per year
- In terms of data management, updating software for ringers to submit data. In 2005 ~60-70% of data received in electronic format
- Funded by 3-year contracts from government (Forest and Nature Agency)
- Steering Committee with representatives from NGOs, academic, govt
- Institute (museum) is focussed less on bird ecology, but more on faunistic questions. Two projects recently launched related to bird-marking include:
 - o Little Owl project
 - o Satellite project with Danish technical university aiming to produce 5g GPS satellite transmitters
- Working on a Danish migration atlas. Final manuscript to be completed by end of August
- Dealing with urgent information needs for modelling avian flu has been a challenge (as with other ringing schemes)
 - o Emphasize value of ringing to understand movements

SPAIN, San Sebastian (presented by Juan Arizaga)

- Spain has 2 separate schemes, both operating throughout Spain and both independent members of EURING:
 - o ESA – (Aranzadi Sciences Society)
 - o ESI – Espana Icona – Managed by Ministry of Environment
- ESA was restructured in 2002, with new management, new regulations, retraining of old ringers
 - o In 2003: 22 ringers, 2005: 33 ringers

- Ringers expected to be engaged in a research project, either their own or a cooperative project, that will likely lead to publications
- Financed by Basque Institutions (region where scheme is based)
- Still working to build program, to deal with political recognition by regional governments and to consolidate ESA as a reference institution about bird study in Spain
- ESI is a larger scheme, and in 2001 had about 200 cooperators who ringed about 260,000 birds

ITALY (presented by Fernando Spina)

- Scheme has about 400 ringers, 300 trainees
- 5 permanent positions, but acquired extra funds for some specific projects.
- Ring ~230,000 birds/year, especially in North
- Scheme strongly emphasizes standardization of methods, biometrics, etc., and focuses on large-scale cooperative projects, making maximum use of first capture data.
- Ringers do not have to pay for rings, and receive equipment free; they have to take training (courses are organized by the scheme), and pass exams.
- ringers are invited to join coordinated projects;
- all ringing data from 1982 including biometrics have been computerized, and working to complete computerization of recaptures
- all new data must be submitted electronically, including morphometrics, fat score, muscle score and body mass, as well as data on ringing effort
- currently submitted by E-mail, but starting next year will be through web
- data from ringing results considered jointly owned by ringing scheme and by ringers, based on a written agreement, though there have been some concerns about this from some scientists
- developing a ringing atlas 1906-2001
- Recent analyses of contents of national data bank include:
 - seasonal maps of numbers of birds caught, corrected per ringing effort;
 - seasonal maps of geographic variation in body condition;
 - 3 volumes on morphometrics of 2.6 million birds distributed freely to all ringers;
- Proposing regional scale ringing atlases to some regional governments
- increased use of ringing for educational purposes

BTO – (presentation prepared by Jacquie Clark, given by Stephen Baillie)

- covers all of Britain and Ireland;
- particular focus is as part of integrated population monitoring, through Constant Effort Sites, Ringing and Recovery data
- ~2,200 ringers, ~800,000 birds per year
- Approximately 11 staff, though some staff working on other projects also use ringing data.
- to end of 2004, 32.8 million ringed, 617,000 recoveries
- all recovery data and selected historical sets of ringing data are computerized
- Historical paper records have all been scanned for archival (but not yet digitized)

- Most new ringing data (90%) submitted electronically using program called Integrated Population Monitoring Reporter – IPMR
 - o Written by an enthusiastic volunteer
 - o Data submission moved from diskette to E-mail on to web-based
 - o Moved from 15% electronic in mid-1990s, up to 90% now
 - o Volunteer is entering remaining 10% (for older ringers mostly)
- Working towards improving reporting rates:
 - o New rings have web address (standard for EURING)
 - o 4 national schemes using this as a trial
 - o can report any recovery from this address
 - o prototype of a web-based system for ringers to download their own recovery data
 - o information sheets, posters, etc. available for ringers on the web
- BTO completed their migration atlas 2 years ago
 - o also a popular book about ringing “Time to Fly” (Jim Flegg)
- Constant Effort Scheme:
 - o Provides some information on changes in adult numbers (but in most cases, other sources are better)
 - o Information on productivity (age ratios)
 - o Information on adult survival through capture-recapture
- Retrapping adults for survival
 - o Additional program to improve demographic information on species not well covered by CES
 - o Choose a species that returns to breed in same area each year
 - o Aim to catch all breeding adults in study area each year (for some species involves colour ringing and resighting as well)
 - o Participants can choose own species, but hope is to get many people working on same species. Must agree to participate for at least 5 years.
 - o Many challenges – need to get high recapture rates, and this has simply not worked for some species/projects: have had to drop a few projects
- BTO Swallow Roost project
 - o Recently joined EURING Swallow Project
 - o Several unanticipated challenges
 - o In many areas, raptor numbers have increased substantially, changing swallow behaviour
 - o Also, roosts have moved from traditional reed beds into cultivated maize.
 - o Interesting spin-off: information on impacts of increasing raptor populations
- Evaluating Integrated Population Monitoring for wintering shorebirds
 - o Many challenges related to capture heterogeneity

Turkey/Jordan/Egypt (presented by Przemyslaw Busse)

- 3 new schemes sprung out of SE European Bird Migration Network
- Goal is learn more about bird migration in Eastern Europe, because only scheme in region was in Israel
- Jordan:

- started in 2002 – partner with university and Royal Society for Protection of Nature. Now has 4 licenced ringers and has ringed >17,000 birds
- collect a set of standard data including measurements, etc.
- Egypt:
 - ~10,000 birds ringed, with 5 ringers, 4 of them focussed on a projected related to ringing and orientation experiments
- Turkey:
 - To date, ~50,000 birds ringed
 - Several sites established, some run by locals, others in collaboration with visiting Europeans, but only 7 trained people
- Many challenges related to maintaining these schemes and building political interest as well as financial support.
- Data from all 3 countries are being maintained by Busse, with copies in each local country.

Poland: (information from Wojciech Kania)

- Scheme is run out of Institute for Ornithology, Polish Academy of Sciences, in Gdańsk with 3 staff (+ 7 scientists, who partly work with ringing data).
- Run a thorough and well-standardised training system (full details were published in 1983 in the Ring (117: 170-173).
- 20 candidates are trained yearly during a 2-3 weeks course.
- Can receive full licence or licence for particular species.
- General ringers (including most amateurs) are expected to learn a lot about many species, to get a full general licence.
- Professionals or others working only on particular species must have detailed knowledge only on those particular species
- Those ringing nestlings must record selected measurements, so that the nestlings can be aged and the hatch date determined.
- 98% of recoveries (170 000) have been computerized.
- Most ringing data is submitted electronically now.
- All data have been fully computerized fully since 2001. Historical data (since 1931) fully computerized for some species, partially for rest (species, age, sex, date, ringer)
- 110 000 – 150 000 birds ringed by nearly 200 ringers yearly.
- Recent cooperative projects include Constant Effort Scheme (CES), EURING swallow project, ten field stations investigating migration for at least 10 (up to 46) years.

Japan (presented by Kiyooki Ozaki)

- Run by Yamashina Institute, with 8 staff though only 30% of their time is specifically on banding
- For example, institute was involved in providing information to help trade and customs officers identify birds in cage bird trade
- Approx. 180,000 birds banded each year, by 440 banders
- Total of 3.6 million birds since 1961 with ~20,000 recoveries

- Analyses of recovery data indicate extensive movement of birds including many Northern Pintails moving between Europe and Asia
- Substantial recent increase in encounters for shorebirds and terns due to use of colour-marking schemes – much better information on movement between Australia and Asia.
- Several Asian countries have some banding activity. Japan has been especially encouraging activity in China. Other active schemes in region include Taiwan and Australia.

U.S.A. (presented by Monica Tomosy)

- cooperative with Canada since 1923
- 5000 banders. Now up to 1.5 million bandings per year, 90,000 encounters (not including same-site recaptures)
- After several attempts, have redesigned and modernized data base to an Oracle-based system—became operational on March 15, 2006 (took 19 months to complete this version to release stage).
- New system has much more flexibility for future expansion, and many new features will be added over time, including increased capacity to handle same site recaptures
- Working towards shift from paper to electronic communication
- For past several years, have been trying to increase band reporting rate:
 - Toll-free numbers on bands. Very effective (increase reporting rates on hunted birds from ~30% to ~80%), but costs ~\$180k per year for answering service
 - Upgrading web encounter page
 - Modelled off EURING web page
 - In 2007, will distribute bands with web address and start encouraging use of web site (need to define a clear starting point to allow calculation of changes in reporting rates for analysis of hunter activities).
- Have provided several different data management programs to banders for submission of banding data, most recent being a FOXPRO based program called 'Band Manager'
 - Being upgraded to a new program (in FileMaker Pro) called "Bandit" which will be released in the autumn
 - Goal is to incorporate extensive data checks within program to reduce data quality control costs (currently have 5 people full-time on error correction of banding and recovery data)
- Promoting banding throughout Western Hemisphere
 - Co-hosting (with Canada and Mexico) a workshop in Veracruz in October
- Actively involved in responding to information needs for Avian Influenza:
 - Challenges with providing data on movement of birds
 - Cooperating in surveys of wild birds for avian influenza, allowing banders to take cloacal swabs

- Challenges:
 - Still only one supplier of bands, which can cause quantity and quality control (cost ~\$250k/year for bands)
 - Major data management tasks, but insufficient staff support: looking to hire new programmers
 - Would like to have more science support within staff to enhance use of banding data, especially in conjunction with data from other sources (e.g. to respond to questions such as information needs for wildlife disease modelling)
 - Need to increase standards for permits, especially with respect to training. Challenging to come up with standard requirements that are accessible to potential banders throughout such a large country
- Federal Advisory Committee (FACA)
 - A committee was established last year to provide recommendations for development of the banding program over the next 15 years

Canada (presented by Charles M. Francis)

- run within government (Environment Canada's Canadian Wildlife Service)
- 1 biologist, 2 permanent administrative staff, some seasonal assistance, especially to handle toll-free telephone reporting
- closely tied to U.S. scheme
 - o separate permitting (~400 permits in Canada), but shared data management, bands/rings, recovery management and reporting
- Actively promoting development of training programs and training materials including books, videos (in cooperation with North American Banding Council)
- Much of banding in Canada is in one of the following three categories:
 - o Waterfowl banding (government-led in support of waterfowl management)
 - o Migration monitoring (quantitative migration surveys at fixed bird observatories, often by amateurs)
 - o Professional researchers (government and university)
- Also some participation in other projects such as MAPS (constant effort banding), and amateur banding in other contexts.
- Canadian scheme is actively promoting ringing in Latin America
 - o workshop in October in Mexico
 - o models being considered range from joint scheme to separate, EURING type schemes
- Working to complete ringing atlases summarizing recovery information from Canadian birds (first volume, on songbirds, published in 2000, two more volumes currently in press. Plan to get all of them up on the web.)

South Africa (presented by Doug Harebottle on behalf of Dieter Oschadleus)

- SAFRING was established in 1948, based at Avian demography unit in Cape Town
- Serves several southern Africa countries plus others from time to time
- About 150 ringers, most in South Africa, about 70,000 birds per year, about 400 recoveries per year

- Total of just over 2 million ringing records
- Recent achievements:
 - Revamped and expanded ringing manual
 - Raptor and waterbird ringing reviews published and available along with general
 - Coordinate 2 training courses annually, one on passerines, one on waterbirds (advertised through internal E-mail forum and web site)
 - Improved data management system
 - Linked to other demographic projects
 - Formerly only summaries of banding data were computerized, but working to enter older data
 - Employ a part-time programmer
 - Developed a system using MySQL
- Challenges:
 - Would like to expand base of ringers, especially in remote areas
 - Most ringers in urban areas
 - Perhaps increase courses and move to other regions
 - Digitizing of historic paper schedules
 - currently in progress
 - data submission electronically since 2000
 - 95% submitted by E-mail. Web submission in development
 - software is supplied to ringers
 - within next 2 years should be caught up
 - Becoming more project oriented
 - Greater focus on quality (banding towards particular research projects) rather than quantity
 - Increased focus in protected areas, as more potential for continuity in those areas (e.g., for mark-recapture studies).
 - Now incorporating morphometric and moult data into system
 - Looking at importance of moult and best ways to record it
 - Funding
 - Formerly supported by S. African national government, but suddenly cut off (drop from 100% to 0%)
 - Namibia is only other national government financially supporting scheme
 - Other countries in southern Africa participate in scheme, and provide national coordinators, but no financial support for central functions.

AFRING (presented by Doug Harebottle)

- This is an international coordinating program serving all of Africa
 - based in Cape Town, using SAFRING infrastructure (originally proposed using EURING model)
- Relatively low profile with a focus on waterbirds due to need for information on African waterbird movements (may move towards an all species structure in future)

- 3 major foci:
 - coordination of waterbird ringing in Africa
 - East African scheme centred in Nairobi
 - West African in Ghana
 - Training and awareness
 - Training courses
 - Increase participation by native Africans
 - Historically primarily Europeans
 - Expanding ringing base
 - Facilitate continent-wide projects/programs
 - African species (e.g. Great White Pelican)
 - Waterfowl (currently link with Avian Flu surveillance)
 - Would like to develop a site network of ringing stations
- Achievements:
 - Successful coordination at continental scale
 - 3 courses run to date (Kenya, Botswana, South Africa) plus others coming up (Ghana in Oct 2006)
 - Data management system already in place
- Challenges:
 - Increase ringer base
 - More courses (requires funding), Training and accreditation, Link with other role players (e.g., APLORI in Nigeria)
 - Collation and curation of all African waterbird ringing and recovery data into AFRING database
 - Requires co-operation of African and European schemes
 - Many African data currently in Europe, because collected by Europeans
 - Working to standardize ringing/recovery submissions
 - Funding currently in place from 5-year AEWA grant (2004-2008)

EURING (presented by EURING Chairman Stephen Baillie)

- Major role is coordination, especially through website (www.euring.org)
- EURING databank (which is now hosted by BTO) stores copies of recoveries from individual ringing schemes, but not ringing data, along with a lot of summary information
- Focus on getting databank up to date with various recovery information
- Nearly all recovery information is in an Oracle database
- Programming provided by a BTO-based volunteer supported by BTO staff
- Data requests must pay a fee to receive data to cover processing costs
- Process is to examine summary data on web site to determine what might be available, then submit an initial inquiry which will be reviewed and needs to be approved by contributing schemes before data can be released
- EURING data bank is basically a large flat table imported from individual ringing schemes
 - Still some challenges related to exchange of data among schemes:
 - Not all schemes are using EURING codes in the same way

- Various different data bases used, including some using Excel spreadsheets for transmission of data.
- Web page has been developed for reporting of rings to any European scheme – has photographs of rings to help public recognize ring types (including colour markers)
 - Tried to keep page relatively simple
 - A lot of information is requested in narrative form, because felt that drop down menus can complicate reporting
- EURING technical conferences:
 - Focussed on new statistical developments in analysis of ringing data. Held approximately every 3 years (next one in New Zealand in January 2007)
- EURING general meetings
 - Representatives from member countries – every 2 years
- Particular projects:
 - Swallow project
 - Migration atlases
 - Constant effort sites
- Avian Influenza – analysis of recovery data funded by EU and undertaken in collaboration with Wetlands International

Co-chairs

Fernando and Charles were thanked for organizing a very useful meeting. Stephen Baillie proposed that they should be asked to continue as co-chairs and this was unanimously agreed by the meeting.