

Preface

Everybody interested in birds – an ornithologist, a recreational birder, and even bird aficionados know about bird ringing, or banding. For most, ringing is only a fragment of their general education. However, a subset of people who learned about ringing were so excited with the method, and how it could be used to solve the bird migration problem, that it became the core of their professional life. This was the case of the authors of this manual. The older one of us – Przemysław Busse – ringed his first five chicks in a swallow nest as a 16 year-old boy in 1953. The subsequent year, he was accepted as a ringer, and in 1955, he started to ring chicks of Black-headed Gull, White Stork and swallows as a member of the Polish Ringing Centre expeditions to Masurian Lakes district. Ringing of full-grown birds was a great discovery during a visit, with Bob Spencer as a host, at the Bradwell Bird Observatory in Great Britain in 1959. The result was surprising. In 1960, the first Polish bird station tried pioneering ringing of full-grown birds during autumn migration, and a group of students from the University of Warsaw started to learn bird migration at the Polish Baltic coast. Our minds were fresh, for we knew nothing about bird migration, but we were enthusiastic. Since bird migration is a vast and very complicated phenomenon, the main idea became to create “a NETWORK working according to the standard methods”. We dreamt about long-term study programme, which later manifested into “Operation Baltic”, which is still the longest-running bird migration research network. The saying “*Never laugh at anyone's dreams. People who don't have dreams don't have much*” was confirmed, and we have the long-term programme to prove it. Among the Polish ornithologists gaining interest in birds during the 1960s and 70s, there was not a single person who did not pass through the Operation Baltic experience. The second of listed authors is not the exception. Although his time with the Operation Baltic work was short (only few days), he worked at the station in southern Poland that organized the ringing of waders. This was enough to establish the ringing station at mouth of the Reda river devoted to wader study in 1983, and it followed suit in the maintenance of long-term studies. The group was called KULING, and it is still actively attracting new generations of ornithologists.

During many years of intensive work at Operation Baltic and KULING, many methods and ideas from the field study of migrating birds were tested. We gained a great deal of experience. Political borders were broken, and the saying that “*birds do not know boundaries*” could be followed by students of bird migration – that is truly a phenomenon on the continental scale. While visiting many bird stations, from Spain and Britain to Russia and from Finland and Sweden to the Middle East and even Tanzania and South Africa, we found that the main problem of international co-operation is the incompatibility of methods and the local routines of work, and these make exchange and efficient use of data files very difficult. And once more the idea of “a NETWORK working according to the standard methods” appeared to be a proper solution. In 1996, an international network was arranged on the East

European flyway – the SEEN (SE European Bird Migration Network). This gave us the opportunity to collect broader experiences and confront new exciting problems to study. The manual is intended to collect and present to wider audience more than 50 years of practice in the field work of ringing of birds, mainly during migration.

We are deeply grateful to all, for there are numerous people who contributed to this manual and discussed its contents. Especially, we would like to thank to Dr. Vladimir Payevsky, Russia and Dr. Ricardas Patapavicius, Lithuania for supplying us with details about working with big Heligoland traps that were less known to us.

We hope that the manual will be useful, not only for bird stations, but for many ringers who ring birds not only for fun, but for whom the ambition is to contribute to science as well. Obviously, not all parts of the manual will be applicable in an individual ringing, but it is always worth it to contemplate anew upon the encounter of novel, sometimes apparently strange ideas – especially when we plan to start a new project.

Przemysław Busse, Włodzimierz Meissner



Figure P1: Three generations of Operation Baltic – KULING – SEEN ringers: Przemysław Busse, Włodzimierz Meissner and Magdalena Remisiewicz.

50 Years of OPERATION BALTIC

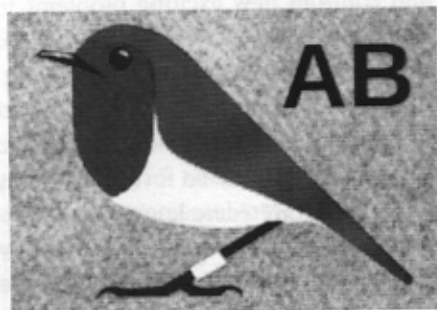


Figure P2: Logo of Operation Baltic (by J. Desselberger and P. Busse).

The Operation Baltic is a scientific programme with the aim of long-term, complex bird migration study along with monitoring numbers of migrating birds. The programme has been running continuously since 1961 and covers both autumn and spring migrations.

The fieldwork of the programme is carried out at few (2-6) seasonal bird stations situated along the Polish Baltic coast.

The routine work consists of:

1. Mist-netting of birds with stable number of nets, working continuously during migration periods (March 24th - May 15th and August 14th - November 2nd). Standardised catching allows evaluation of long-term number trends in the bird populations passing the stations;
2. Ringing and measuring of all individuals caught. The standard set of measurements contains: wing-length, tail-length, quantitative wing-formula, weight, and fatness. This is the basis for migration and biometric studies;
3. Visual observations of diurnal passage; bird species, numbers and direction of flight are observed all day, fifteen minutes per hour; this gives an information about the dynamics of migration as well as long-term trends in species not caught by the nets;
4. Extensive testing of nocturnal migrants for directional preferences using new orientation cage desing which is one of the most important points of the fieldwork now;
5. Volunteers. University students and amateur birdwatchers, who help the professional staff of the stations, do most of the fieldwork. The collaboration with amateurs allows around 50 young people to be trained in bird identification every year, along with increasing exposure to scientific work and raising awareness about the bird protection. Participation of volunteers makes the cost of programme work relatively affordable.

During Operation Baltic, over 1 600 000 birds were ringed and over 1 000 000 of them fully measured. For few small passerines, e.g. Goldcrests, collected data exceeded European totals. A dozen or so thousand ringing recoveries cover Europe, from Portugal to the Ural Mountains and from Finland to Greece, as well as few in Middle East and African countries. It can help to look for areas that are critical for bird survival. This is very important when monitoring data are evaluated.

The Operation Baltic monitoring data represent one of the longest passerine monitoring series in the world. They are also the most extensive, as they contain information from few stations working according to the same methodical standard, and they cover a much wider variety of species (parallel bird netting and visual observations) compared to stations limited to bird catching only. No single passerine bird species is excluded from the field of interest of the programme, so the Operation Baltic data contain information about a number of rare, even endangered, species of birds.

The value of monitoring data grows exponentially with prolongation of the data series. Evaluation of long-term population cycles is possible only when periods of monitoring work exceed the length of the cycle. The level of short-term fluctuations around the long-term trends can be studied successfully only on long data series.

30 Years of WATERBIRD RESEARCH GROUP KULING



Figure P3: Logo of Waterbird Research Group KULING (by M. Skakuj).

The story of KULING has its roots since July 1981. During this season, two students from University of Gdańsk had seen walk-in traps for the first time in their lives and took part in wader ringing. After a couple of days spent at a wader ringing camp in southern Poland, they returned to the Baltic coast with the idea of organizing wader

ringing camp in the Reda river mouth. The Waterbird Research Group KULING was established in 1983 by a group of so-called KULING fathers (Włodzimierz Meissner, Bogdan Brewka, Michał Skakuj and Arkadiusz Sikora), as an informal part of the students' scientific circle dealing with autumn migration of waterbirds and waders in the Gulf of Gdańsk.

Since the very beginning, KULING had a marvellous atmosphere that led students, pupils, as well as amateurs and professional ornithologists to work together in the field and share ideas during social meetings. KULING's field activities became focused on two main topics: studies on wader migration and monitoring number of waterbirds during the non-breeding season in the western part of the Gulf of Gdańsk. In 1996, WRG KULING was registered as a non-governmental organization, even though it is closely connected with University of Gdańsk.

Between 1983 and 2012 KULING team ringed more than 70 000 waders, about 8 000 wagtails and pipits, and more than 8 000 gulls. The vast majority of birds were ringed at temporary working ringing stations. The overall number of birds ringed by KULING reached 100 000, and this gives to us the opinion that it is one of the most effective ringing teams in Poland.

The archive of publications signed as "paper of WRG KULING" consists of 150 scientific papers, and the majority of them concerns wader migration. Notably, we are also involved in educational activities in the Polish coast.

We decided to call our group KULING after the name used by the native people of the Puck Bay area for large waders. They recognize only two kinds of waders: small ones (up to Knot, *Calidris canutus*, size) that they call "bigus", and large ones that they call "kuling". It sounds very similar to "kulik" – the Polish name of the Eurasian Curlew, *Numenius arquata*. "Kuling" seemed to us a better name than "bigus", and we adopted it as the name of the group.

15 Years of SE EUROPEAN BIRD MIGRATION NETWORK



Figure P4: Logo of SEEN (by T. Cofta and P. Busse).

Bird migration is a phenomenon on a continental scale, greatly differentiated in various regions, and it has many complicated features. There are some main flyways

within continental migration systems that are studied more or less in detail. Bird populations of the same species, but originated from different areas, can migrate via various flyways and to different winter quarters. So, it is not enough to study the phenomenon at a single bird station, at one limited area, nor along a single flyway. The "network style of work" is absolutely necessary. Some attempts to network at an international scale were run by Operation Baltic, which attracted a few ornithologists from the late Soviet empire to collaborate. It was a very limited collaboration. Next, trials were made within "ESF European-African Songbird Migration Network", working for three years on the SW bird migration flyway in the mid-1990s, and finally *Manual of Field Methods* was published. In 1996, a group of ornithologists from northern and central Europe established SEEN ("SE European Bird Migration Network") that focused on the SE flyway that had been poorly studied as of yet. Necessity for a common methodical program led to the preparation of a comprehensive manual, published in 2000, which gave not only methods of the fieldwork, but also methods of evaluating the collected material.

SEEN is an international umbrella organization of institutions studying bird migration along the South Eastern migration route that leads from Europe and western Asia to Africa. Our objectives are to encourage research and enhance understanding of migratory flyways, to establish a uniform methodology of bird migration data collection, to elaborate and develop new techniques of data analysis (including computer software, highly specialized statistical methods etc.), to assist in international co-operation and the exchange of information and experience relating to bird migration, and finally, to promote the conservation of birds and their habitats. Our network offers support in organizing bird migration research, regularly conducting training in the methodology of bird migration studies, particularly in countries where, until now, such studies were either not conducted at all or conducted on a very irregular basis. Participation in SEEN is non-exclusive. Ornithological research stations, departments and laboratories of colleges, universities and other schools of higher learning, scientific and nature protection organizations, non-governmental organizations and study groups working in the field of bird migration research can become members of SEEN.