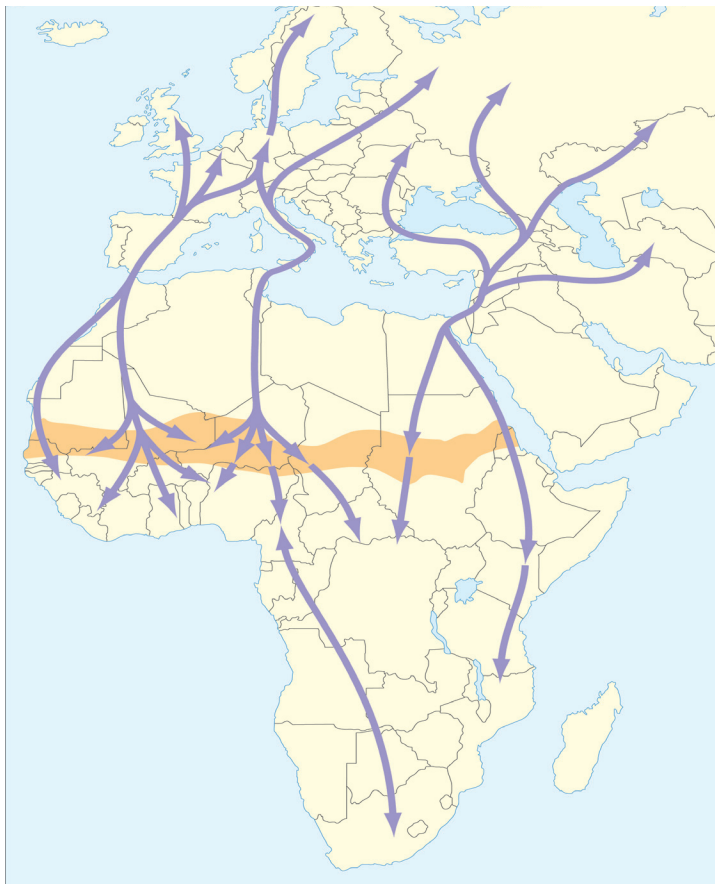


Migrant Birds in the West African Sahel

- Many birds that migrate between Africa and Europe are in decline. They face threats in their breeding, wintering and staging areas.
- The Sahel, one of the poorest regions of the world, is a key wintering region for these birds.
- Birds in the Sahel share semi-arid farmlands, grasslands and woodlands that are closely managed for agriculture and livestock husbandry.
- Within the Sahel, policy needs to be integrated to address the needs of the rural poor and of declining migrant birds together.
- More research is urgently needed on the impacts of agriculture, livestock keeping and woodland management on migrant birds in the Sahel.

Millions of birds migrate very year between the temperate and arctic regions of northern Europe and the dry and wet tropical ecosystems of Africa. They breed in the short northern hemisphere summer, move south in autumn through Europe and the Mediterranean to spend the winter in Africa, before moving back again to catch the northern Spring. This African/European¹ bird migration is one of the world's great long-distance animal movements.



The African/Palaearctic Bird Migration System

Climate across the vast ecological zone that stretches from the Atlantic seaboard of western Europe to the Pacific coast of Siberia is strongly seasonal. After breeding, many species of bird move south to winter in Africa and south or southeast Asia. Birds from Europe (from west of the Urals) migrate to Africa² along flyways across or round the Mediterranean (through the Iberian Peninsular, Italy, the Balkans or through the Middle East). Birds cross the Sahara, or go along the Red Sea and the Nile Valley. Once in sub-Saharan Africa, birds use a wide range of habitats, sometimes moving around through the wintering period.

The Sahel and its Birds

The name 'Sahel' is given to the countries bordering the south side of the Sahara desert³. Here Arab traders reached fertile rainfed livestock and farming land after the long traverse of the desert, and the ancient trading cities such as Mopti, Timbouctou and Kano. The Sahel also describes a semi-arid ecoclimatic zone. An annual rainfall of 2-600mm all falls in three months of the northern hemisphere summer.

The farmlands, grasslands and woodlands of the Sahel are important wintering and staging areas for a wide variety of birds migrating from Europe. Many species undertake this migration, including waterfowl, waders, birds of prey and songbirds: over 2 billion songbirds migrate from Europe to sub-Saharan Africa each year⁴.

The Sahel and its People

Birds that winter in the Sahel use landscapes intensively managed by farmers and livestock keepers⁵. The Sahel is home to about 50 million people, about a quarter living in the region's rapidly expanding cities (Dakar, Ougadougou, Niamey, Bamako and Kano). The countries of the Sahel are amongst the poorest in the world⁶. Four Sahelian countries rank in the bottom 10 of the 169 countries in the UNDP Human Development Index⁷. The poverty of Sahelian countries makes them key targets for global action to achieve the Millennium Development Goals.

The Sahel came to global attention when the region was plunged into a prolonged drought, at its peak 1972-74. At the time, this low rainfall was considered unprecedented, although it is now known that the region has experienced highly variable rainfall in past centuries and millennia. Low rainfall persisted until the late 1980s, then recovered somewhat, although it remained variable and below long-term averages⁸.

While urban populations have grown rapidly, the Sahel is still predominantly rural. Farmers and pastoralists have

sophisticated strategies to cope with variability of rainfall within and between years: spreading risk, diversifying subsistence activities and maintaining mobility (for example, seasonal labour migration). In many areas dense rural populations allow manuring to maintain soil fertility and farmland tree planting⁹. Despite decades of alarmism from observers outside the region, Sahelian farmers are not passive victims of fate, driven into a marginal existence by population growth, but skilled managers of scarce and fluctuating resources¹⁰.

The Decline of African/European Migrant Birds

Many of the bird species that migrate between Europe and Africa are in decline throughout their breeding range¹¹. The earliest declines were in the 1970s, in species wintering in the Sahel, such as Common Whitethroat or Sedge Warbler. Species such as Pied Flycatcher and Wood Warbler Cuckoo that winter further south in the Sudan, Guinea Savanna and forest zones declined more recently. Other species such as Turtle Dove and Spotted Flycatcher have declined consistently since the 1970s.



Yellow Wagtail (left) and Woodchat Shrike (right) are migrants that typically winter in the Sahel. Photos © Paul Hillion

Threats to birds that migrate between Europe and Africa are poorly understood, but occur in three distinct zones:

1. Breeding grounds, particularly in the in the farmlands and woodlands of northern and Western Europe. Threats here include intensification of agriculture, changes in forest and woodland management, loss of breeding and/or feeding habitat, predation and climate change;
2. Flyways across Europe, the Mediterranean and the Middle East. Threats here include: loss of feeding areas (such as wetlands), hunting, predation and climate change;
3. Wintering grounds in sub Saharan Africa. Threats here include drought, expansion and intensification of arable and livestock agriculture, local and commercial cutting of trees for fuel, and dam construction.

More research is needed on all of these threats. There is a particular need for research to understand the nature and cause of land use change in the Sahel that may reduce the numbers of migrating birds, because there may be opportunities to develop policies that address both biodiversity decline and human poverty.

Conclusions

Long-distance migration systems are an important focus for national and international conservation policy¹². Conservation of these birds is challenging because of their trans-boundary movements and the number of countries involved.

However, the decline of African-European migrant birds is not simply a 'conservation problem', because the Sahel is home to large numbers of the world's poorest people. Conservation policy must be must be developed in the light of the needs and desires of the owners and occupiers of the lands where the birds spend the winter. Two needs stand out:

- More research on the interactions between rural landholders and migrant birds in West Africa;
- Integrated policy solutions that address both bird conservation and poverty eradication together in the Sahel.

¹ Scientists refer to this as African/Palaeartic migration, since the birds breed in the Palaeartic (or old world arctic), one of eight global ecological zones.

² Some birds breeding west of the Urals migrate to Asia; some birds breeding east of the Urals migrate to Africa.

³ Sahelian conditions occur in Senegal, Mauritania, Mali, Burkina Faso, Niger, Nigeria, Chad, Sudan, Ethiopia and Eritrea.

⁴ Hahn, S., Bauer, S. & Liechti, F. (2009) 'The natural link between Europe and Africa: 2.1 billion birds on migration' *Oikos*, 118 624-626.

⁵ Raynaut, C. (1998) *Societies and Nature in the Sahel*, Routledge, London.

⁶ World Bank: <http://web.worldbank.org>, UNDP: <http://hdr.undp.org/en/>.

⁷ Mali 160th, Burkina Faso 161st, Chad 163rd; Niger 167th: <http://hdr.undp.org/en/statistics/>.

⁸ <http://jisao.washington.edu/data/sahel/>.

⁹ Mortimore, M. (1989) *Adapting to Drought*, Cambridge University Press, Cambridge.

¹⁰ Mortimore, M. (1998) *Roots in the African Dust*, Cambridge University Press, Cambridge; Mortimore, M. and Adams, W.M. (1999) *Working the Sahel*, Routledge.

¹¹ Zwarts, L. et al., (2009) *Living on the edge: Wetlands and birds in a changing Sahel*. KNNV Publishing, Zeist, NL.

¹² Convention on Migratory Species (<http://www.cms.int/>)