Intercontinental migration of an Eurasian Hobby (*Falco subbuteo*) tracked by means of a 5g satellite transmitter

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**Introduction**

The Eurasian Hobby is a small falcon. It breeds across Europe and Asia and is a long-distance migrant. European birds winter in Africa. More than 5,700 Hobbies have been ringed in 10 European countries, but so far there have been only two ring recoveries south of the Sahara desert. Satellite tracking using the Argos system is now an accepted technique for long distance migration studies of birds. It is generally accepted that any device we burden a bird with should weigh no more than 3% of the bird’s weight if we are not to affect its behavior.

**Method**

The prototype of the smallest satellite transmitter (PTT) produced so far weighing just 5 g was fitted for the first time to an adult female Hobby (weight 285 g) on 9 August 2008 in Germany near Berlin and successfully recorded the annual migration route. The Hobby had raised two offspring and was trapped near its eyrie using the dho-ghaza-method. This new type of solar powered PTT was still in the trial phase and is still working (in August 2009).

**Results**

Interesting data was obtained on the winter habitat used, the home range size in winter and migration speed when crossing ecological barriers (e.g. the Sahara).

Outward migration route in 2008 up to the southernmost point in Angola not showing local movements during wintering in Angola.

Over two months after arriving in southern Angola it migrated further in a south-easterly direction and arrived in Zimbabwe on 29 December. On 1 January 2009 it reached the southernmost point of its migration between the cities of Bulawayo and Harare in central Zimbabwe. The distance migrated from the breeding site, not including regional movement, was up to this point over 10,000 km. The Hobby did not linger for long in Zimbabwe and retreated almost immediately to its wintering area in Angola. The bird arrived back at its old breeding site in Brandenburg in May.

But even in its wintering area the small falcon showed an eagerness for travel, as witnessed by the recording of 543 different fixes. Of the barely 25 weeks spent in the south the bird never spent as long as a week in the same place up to six weeks preceding return migration. In the wintering period from 16 October 2008 to 7 April 2009, the bird covered a total distance of at least 9,025 km. This calculation is based on the distance between the 76 precise night roost fixes, which amounted to somewhat less than the half of all overnight roosting places. Within Angola the fixes during the night, usually recorded at an interval of 48 hours, were sometimes more than 300 km apart. This means that the actual distance covered by the bird during wintering was probably significantly greater.