

## Biography of a barn owl (*Tyto alba*)

### Summary

In Lower Saxony, Germany, a female Barn Owl, whose days of birth and death are known, reared 32 chicks during her nearly six years of life, together with two partners successively. From two of these descended 22 grandchildren and four great - grandchildren. Obviously she made one second brood. She herself as well as her three – recaptured - breeding descendants made their first broods less than one year old at a maximum distance of 9.1 kilometres apart from their native places.

### Introduction

Consequent marking and control of almost all individuals of the local population not only gives data to population dynamic of this population and to many questions concerning the biology but illustrates all that by especially informative single life histories. Such a life history for which the date from birth to death are known will be presented here. I premise that in the study area in which the birds mentioned here live they all are named. Firstly this method facilitates for us, the ringers, our work as names can be kept in mind much easier than ring numbers. Secondly discussions about single birds and their families are much less loaded by identification errors. You too, honourable reader, will profit.

### Life history

The life of our bird totally passed in the study area Kniprath/Stier in the region "Landkreis Northeim" in southern Lower Saxony, Germany. It started in 1996, a mostly successful year (MAMMEN 1997) in the village Wiershausen. The barn owls Friedrun and Freddy Steinhoff, both unknown until then to us, successfully raised seven chicks.

Until the breeding season 1997 here like in other regions the numbers of barn owls were reduced markedly (MAMMEN 1997). Instead of nearly 70 broods in the past year there were only 16. So it was very welcome that two of our more than 300 young had survived in our area and now, 1997, settled as breeders as normally barn owls do (MEBS 1987, GLUTZ VON BLOTZHEIM & BAUER 1994, KNIPRATH et al. 1999). One of these was, as detected during the brood, a female and eldest child of Friedrun and Freddy. This bird, whom we now named Gerda, made her first brood in Gremshiem, a village 9,1 km north from her birth place Wiershausen. Her mate, we had named him Gautama, was unknown to us, thus immigrated.

Gerda and Gautama then breed successfully every year until 2000 (see table). They remained together as a truthful pair, as most barn owls do if they live long enough. They thus fitted the image we have about the normal partnership of barn owls (KNIPRATH 1999, KNIPRATH u.a. 2004). Moreover, they not only were faithful to each other, they also stood in Gremshiem. Only once, from the brood 1998 to that of 1999 they moved within the village for about 200 m and then stood there. That is not totally true: In 1998 Gautama had a second brood but we did not capture the mate. We are convinced that it was Gerda, because in the following year she again bred here with Gautama. Already this second brood had been realized at the new place, the movement hence from the first to the second brood in 1998. Fidelity to the breeding site once chosen often has been proved for barn owls and obviously is most common. (GLUTZ VON BLOTZHEIM & BAUER 1994, MEBS & SCHERZINGER 2000). This pair showed more a peculiarity of barn owls in choosing their breeding site: If there is an additional site not too far this one will be preferred for a second brood to the first one considerably polluted by the first brood. To make a second brood in very good years also belongs to the "common" in central European barn owls.

In 2001 Gautama appeared no more. As he hitherto had been resident and had shown no inclination to divorce we assume that he had died. For Gerda a new mate, Kaspar, appeared 2001. That is normal: Widowed barn owls mostly very quickly find a new partner.

Gerda's end came in February 2002. She was found dead on the 14<sup>th</sup> in Dankelsheim, 3,4 km apart from her last breeding site. Hence she did not stay at her breeding site during the winter (or in the very wet February). Probably she only was searching for food and did not intend to change breeding site. From the year 2001 to 2002 in that region the number of breeding pairs had diminished by about 70%.

During her lifespan of nearly six years Gerda made six broods with two males where we include – in spite of the uncertainty (see above) – the second brood in 1998 and raised 32 young (see table). As life production this number is unusually great. As the normal life expectancy of barn owls amounts only one year with increasing tendency up to the 3<sup>rd</sup> year (GLUTZ VON BLOTZHEIM & BAUER 1994), those numbers only rarely are reached. During 20 years with a total number of 357 broods MARTI (1997) found for the north American

subspecies *Tyto alba pratincola* only one ♀ to reach this number (and to exceed it remarkably with 50). The average of all ♀ there was at 5,98 chicks.

Not the number of descendants for its own has the biological importance (fitness) but the number of those producing a new generation themselves. About the numerous descendants of Gerda we at least know that: Two of her sons – one, John, 2<sup>nd</sup> of 7 of the 1999 brood, and the other, Kunibert, 2<sup>nd</sup> of 6 of the brood 2000 – themselves as yearlings bred in the region as Gerda had done: John first bred in Dannhausen, 6 km SSE from his birth place (without success), then in Heber (2,6 km NW, replacement brood with 6 young), one year later in bigyny (see KNIPRATH et al. 2004) in

Hachenhausen (1,3 km ♀ W with altogether 10 chicks), Kunibert one year after John 4,3 km S in Heber (6 young). So Gerda had 22 proven grandchildren.

In the brood of John in Heber the youngest was Kornelius who himself – he to as yearling – raised 4 young in Wrescherode, 3,5 km WSW from his birth place. So we know of 4 great grandchildren of Gerda.

Kunibert was found dead on 2002-01-23 in Dannhausen, 2,6 km SE from his breeding site. As we later did not find any one more of the named birds Gerda and with her her total offspring – if not one of them as non breeder escaped our trapping activities or emigrated – have died.

**table: Life data, broods and descendants of the barn owl ♀ named Gerda**

year	1996	1997	1998	1999	2000	2001	2002
village	Wiershausen	Gremshheim	Gremshheim	Gremshheim	Gremshheim	Gremshheim	Dankelsheim
partners		Gautama	Gautama	Gautama	Gautama	Kaspar	
data Gerda	*1996-05-29						+ 2002-02-14
children		5 chicks	7 chicks	6 chicks + John	5 chicks + Kunibert	7 chicks	
grandchildren				19 chicks + Kornelius	7 chicks		
great-grandchildren				4 chicks			

## Literature

GLUTZ VON BLOTZHEIM, U. & K. BAUER (1994): Handbuch der Vögel Mitteleuropas 9, 2. Aufl., Aula Verl. Wiesbaden  
 KNIPRATH, E. (1999): Überlegungen zur Partnertreue bei der Schleiereule (*Tyto alba guttata*). Eulenrundblick 48/49: 28-30  
 KNIPRATH, E., R. ALTMÜLLER, H. SEELER & S. STIER (1999): Zum Zeitpunkt der Brutreife mitteleuropäischer Schleiereulen (*Tyto alba guttata*). Die Vogelwarte 40: 145-146

KNIPRATH, E., H. SEELER & R. ALTMÜLLER (2003): Partnerschaften bei der Schleiereule (*Tyto alba*). Eulenrundblick 51/52: 18-23 (English version see this home page)  
 MAMMEN, U. (1997): Eulen – Brutsaison 1995 und 1996. Eulenrundblick 46: 24-28  
 MAMMEN, U. (1998): Eulen – Brutsaison 1997. Eulenrundblick 47: 21-25  
 MEBS, T. & W. SCHERZINGER (2000): Die Eulen Europas. Frankh - Kosmos