

Winter census of House Sparrow (*Passer domesticus*) in Berlin.

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Introduction

House Sparrow (*Passer domesticus*) is one of the most successful bird species following man and its habitations over large areas of the world. However, the success story becomes stained as serious decreases over the last two or three decades are told from wide areas of Western and Central Europe. Hence, House Sparrow deserves high attention about future perspectives.

In Berlin a census project on winter birds was started in 1993. House Sparrow played a dominant role and some results about ecology and dynamics will be highlighted.

Method

- **5 ha**-plots were selected from **different habitat types**,
- for each plot **variables of environment** are estimated and number of **feeding stations** counted,
- census of **numbers** of House Sparrows (and others) during
- **four one-hour-visits** between December and February,
- cumulative coverage of **100 plots** 1993 – 2004,
- a **geometric mean** (ind./5 ha) of a plot was calculated from the records of all four visits of a winter.

Results

1. **Geometric mean numbers (ind./5 ha)** of different habitat types are presented in fig. 1. Median statistics are given in tab. 1.

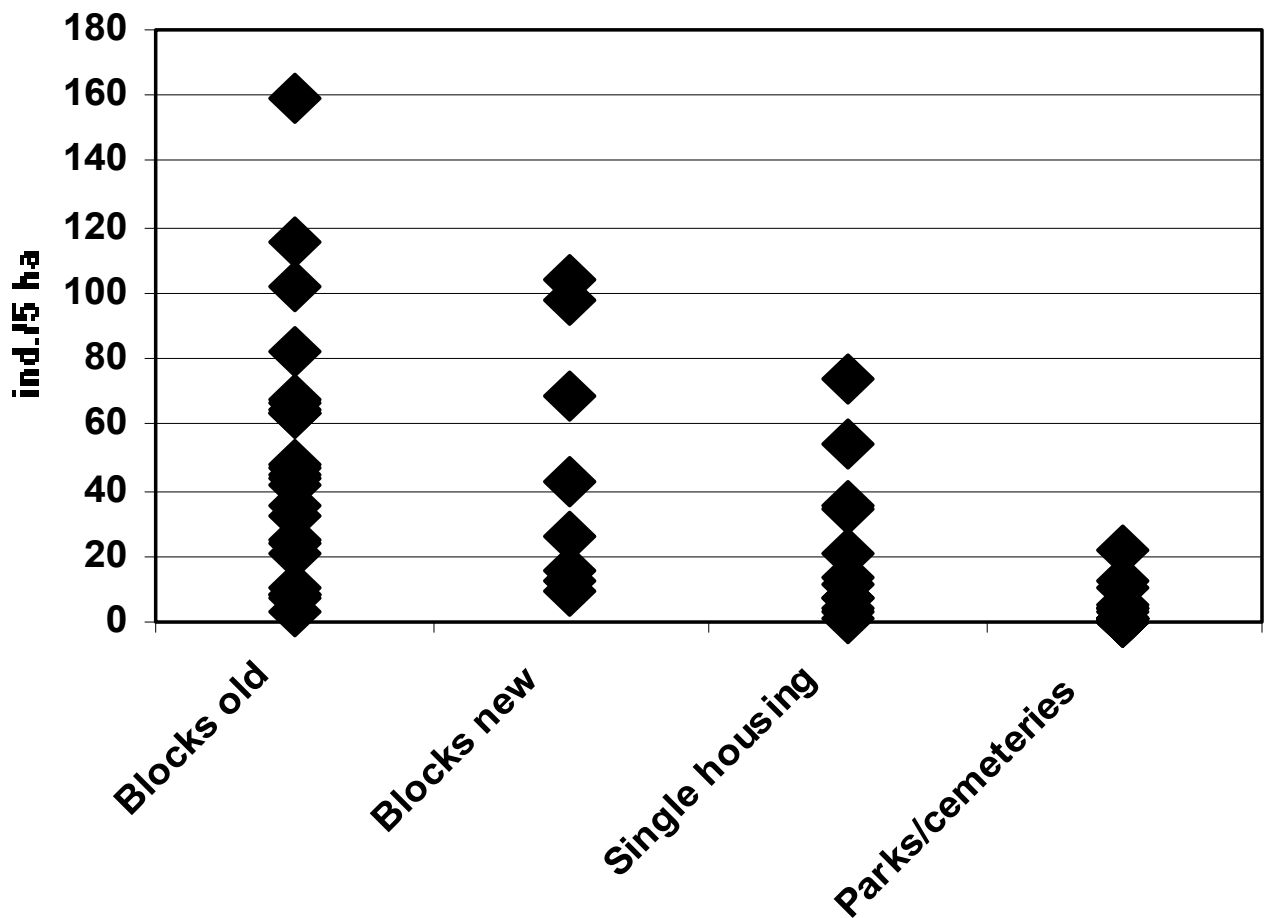


Fig. 1 Numbers of House Sparrow (*Passer domesticus*) per plot and habitat type of 68 selected plots.

	25%- Quartile	Median Ind./5 ha	75%- Quartile	n
Blocks old type	24,0	44,9	65,6	25
Blocks new type	15,2	34,5	76,3	8
Single housing	6,5	12,5	34,7	12
Parks/cemeteries	0,2	0,9	3,8	23

Tab. 1 Median-statistics of fig. 1

Statistics conform more or less with **mean results on breeding densities:**

- Blocks old type 40,5 ind./5 ha
- blocks new type 47,5 ind./5 ha
- single housing 21,5 ind./5 ha
- parks/cemeteries not controlled

(calculated from BÖHNER, SCHULZ & WITT 2003)

2. **Correlations** of mean numbers with **area of houses** (% estimate for each plot) and with number of detected **feeding stations** are calculated for each habitat type. (Tab. 2).

	r house area	r feeding stations
Blocks old type	-0,12	0,50
Blocks new type	-0,64	0,51
Single housing	0,50	-0,19
Parks/cemeteries	0,31	-0,05

Tab. 2 Correlation coefficients (r) for different habitat types

- Area of housing has a negative effect for blocks of new type (high-rise),
- whereas for single housing it has a positive effect.
- Feeding stations are essential for both types of block buildings.

3. **Dynamics** are calculated from paired controls of a plot in consecutive years (at least in two).

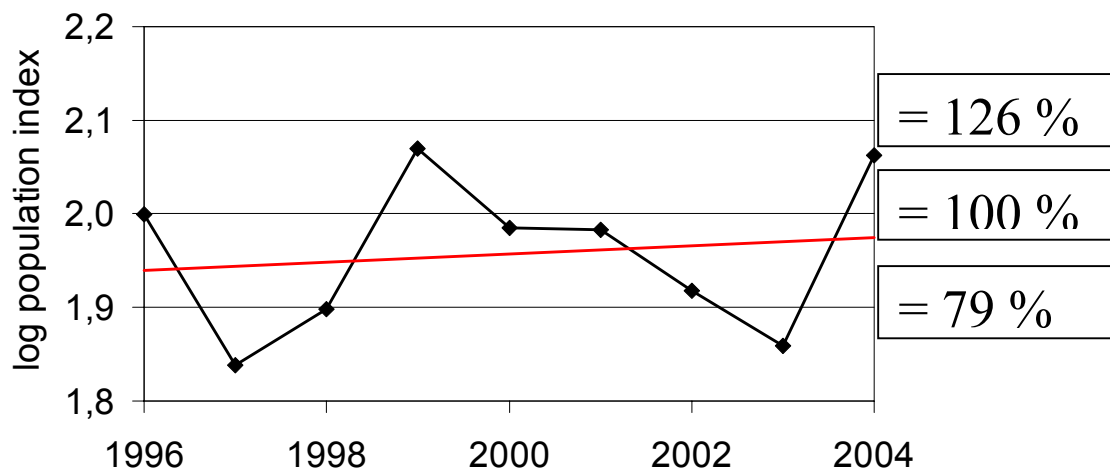


Fig. 2 Change of (log) population index of House Sparrow (*Passer domesticus*) with reference year 1996 (log index = 2 = 100%)

Statistical weights:

- 1996-2000 3-4 paired plots,
- 2001-2003 8-10 paired plots,
- 2004 5 paired plots.

The **regression line** shows a non-significant slight increase (= stability).

Discussion

- **Easy winter census may replace tedious census of breeding pairs,**
- area of housing may be less important than **number of humans** inhabiting them
- and providing more **numerous feeding stations, which are essential for winter survival.**

BÖHNER, J., W. SCHULZ & K. WITT (2003): Bestand und Abundanz des Haussperlings (*Passer domesticus*) in Berlin 2001. Berl. ornithol. Ber. 13: 42-62.