

Avoiding bird collisions with glass surfaces. Test of 9 markings in the unlit Flight Tunnel.

December 2005

DI Martin Rössler on behalf of the Ombuds Office for Environmental Protection of the City of Vienna (Austria).

german version (466 KB pdf)

<http://wua-wien.at/images/stories/publikationen/vogelschlagstudie-2005.pdf>

„Vermeidung von Vogelanprall an Glasflächen – weitere Experimente mit 9 Markierungstypen im unbeleuchteten Versuchstunnel.“

DI Martin Rössler im Auftrag der Wiener Umweltschutzbehörde

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From July 1st until August 19th 2005 an experimental study has been conducted to evaluate the efficacy of 9 glass markings designed to avoid bird collisions, similar to a test in 2004. The behaviour of 975 birds (41 species) was analysed in a 7.5m long Flight Tunnel at the Biological Station Hohenau-Ringelsdorf (Austria). The animals were caught with mist nets. The aim of the study was to analyse regular dot and square patterns, 2cm wide stripes in a grid of 10 by 20cm, scattered vertical lines and 2mm wide horizontal lines with an interspace of 28mm. The comparability of the tests in 2004 and 2005 could be confirmed with a test marking used in both years (2cm wide vertical stripes with an interspace of 10cm). The patterns cover 6.7% to 28 % of the glass panes. In 794 choice tests marked versus unmarked pane the eight markings tested first time proved to be efficient and will decrease the danger of bird collisions in open land.

The interpretation of the results is linked to the discussion of results of the previous year. The test of the grid-marking shows that horizontal components do not decrease the efficacy of a pattern. Because horizontal stripes with an interspace of 10cm are less efficient than vertical lines with the same interspace (found out in 2004) and very thin horizontal stripes with a smaller interspace are efficient, the issue of size and interspace of markings should be further investigated. Fritted glass (small squares) was less efficient than the film-markings, even though the pattern covers 25% of the glass. Thus the issue of transparency should be studied to improve fritted markings. 2004 and 2005 fourteen markings were tested at the Biological Station Hohenau-Ringelsdorf. Five very efficient markings cover less than 20% of the glass. There is also an efficient marking with 6.7% coverage, in terms of public acceptance and cooperation with producers further improvements should be possible.



6.7%



0.0%



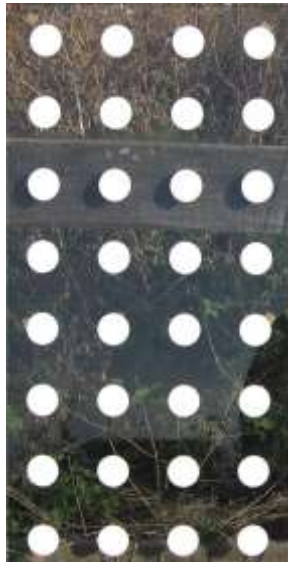
4.5%



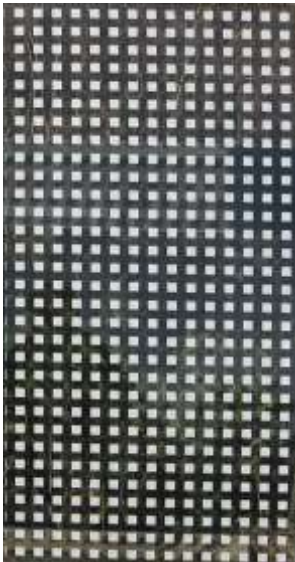
4.7%



4.4%



3.5%



10.5%



0.0%



4.6% (2004) 6.7% (2005)



flight tunnel 2004

“%“ birds flying towards the marked pane in the choice experiment