Avoiding bird collisions with glass surfaces. Experimental investigations of the efficacy of markings on glass panes with wild birds.
October 2004

DI Martin Rössler und DI Thomas Zuna-Kratky on behalf of the Ombuds Office for Environmental Protection of the City of Vienna (Austria).

german version (1,02 MB pdf)
http://wua-wien.at/images/stories/publikationen/vogelschlagstudie-2004.pdf

„Vermeidung von Vogelanprall an Glasflächen – Experimentelle Versuche zur Wirksamkeit verschiedener Glas-Markierungen bei Wildvögeln.“
DI Martin Rössler und DI Thomas Zuna-Kratky im Auftrag der Wiener Umweltanwaltschaft.
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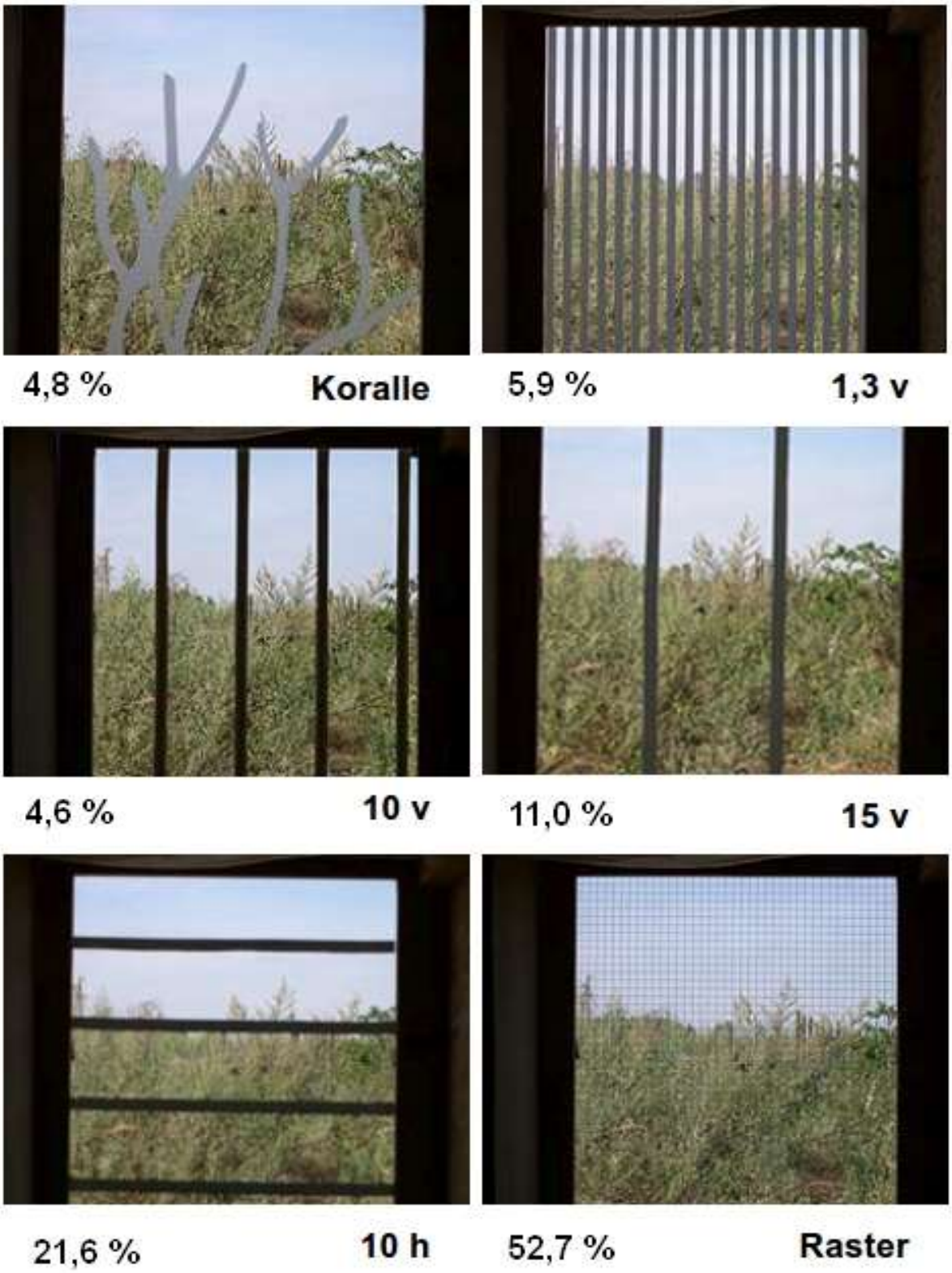
Between July 2nd and August 9th 2004 a first experimental study with a high sample size has been conducted to evaluate the efficacy of glass markings to avoid bird collisions. The behavior of 1.021 birds caught with mist nets at the Ringing Station Hohenau-Ringelsdorf (Austria) was tested in a 7.5m long Flight Tunnel. Daylight only came into the tunnel through glass panes (total area 1m²) at the northern end of the test facility which is built in open land. The light worked as an attractor for the birds which were released in the southern end of the tunnel. An impact due to the time of day could be excluded. 528 choice tests with two glass panes side by side (one marked, one unmarked) were conducted. From six markings tested one pattern showed no effect („Raster“, white fritted glass, 1mm matrix, 11mm interspace) and one was significantly less efficient than the other four („10h“, white adhesive tape, 2cm horizontal stripes with an interspace of 10cm). There were no statistical differences in efficacy between three white markings with vertical stripes with different interspaces (1,3cm – „1,3v“, fritted glass, 10cm – „10v“ and 15cm – „15v“, both adhesive tape) and a non-geometric pattern („Koralle”, semitransparent film). A classification of the birds in optic-locomotive groups orientated on their preferred habitat showed no difference between the efficacy of the markings. Different efficacies within the groups could not be evaluated due to the small size of the groups. In 197 choice experiments „10v“ was compared versus „Koralle“, „15v“ and „10h”. „10v“ as reference marking showed significantly less collisions. Some results apparent in elder studies (e.g. KLEM 1990, SCHMID & SIERRO 2000, ECKMAYER 2001) could be confirmed with a larger sample.



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