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"Evaluating alternative flight plans in thermal drone wildlife surveys—simulation study"

Supplementary material

Table S1. The details of ungulate thermal drone surveys conducted in hunting district nr 473 in Krotoszyn Forest District, Poland.

Unmanned Aerial Vehicle
Fixed-wing airplane AVI-1 (Taxus SI, Warsaw, Poland) Wingspan: 3.5 m Motor: electric Maximum flight time: 90 min. Equipment: MP2128 autopilot (MicroPilot, Stony Mountain, Manitoba, Canada) TIM-4P GPS module (U-blox, Thalwil, Switzerland) 3DR radio telemetry system (3D Robotics, Berkeley, CA) LED lights to ensure visibility in the dark
Sensor
Radiometric thermal infrared camera IRMOD v640 (Vigo System S.A., Ożarów Mazowiecki, Poland) with uncooled, microbolometer focal plane array detector Resolution: 640×480 pixels Pixel size: 17 μm Spectral range: 8–14 μm Lens: 25 mm, f /1.2 Frame rate: 1 per sec.
Survey flights
Date and time of surveys: 1. 28.03.2017; 04:50-07:20 2. 28.03.2017; 20:25-23:35 3. 29.03.2017; 20:25-23:20 Average speed: 73 km/h Programmed altitude: 150 m above ground level Ground sampling distance: 10.2 cm