Patrouillenflug mit scharfen Richtungsänderungen bei der Kleinen Stubenfliege, Fannia canicularis (Diptera: Fanniidae)

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Typical flight of Fannia canicularis (Linnaeus 1758) circulating around downward hanging objects is described by video analysis with sufficient time resolution (50 half-frames per second). The mean speed achieved during straight flight is 0.4-0.8 m s⁻¹, i.e. 85-170 body lengths per second. At lower speeds, the angle of attack between the trunk and horizontal level is larger. The coordination of wing movement during straight ahead flight does not appear to differ from that of calliphoride flies. The typical, abrupt changes in direction occur at angles between 140° and 40°, within 80-160 ms. At the moment of darting sideways, flight speed is reduced to about 70% of the speed flown prior to turning. Acceleration in the new direction increases more rapidly after flying at a smaller path angle. Flight speed after turning at 40° is approximately 180% of the speed at the moment of turning, it is not significantly higher at 140°.

Key words: Fannia canicularis (Linnaeus 1758) - angle of attack - co-ordination of wing movement - insect flight - curving flight - flight coordination - path angle - straight flight - video analysis

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