



COMMON SWIFT PETER RYAN

# SWIFT ascent

## Why do Common Swifts fly at high altitude twice daily?

to roost at lower altitudes. One function suggested for these transient ascents is the identification of the most suitable altitude for roosting based on current weather conditions.

However, a number of observations of Common Swift flight behaviour have been inconsistent with the notion of them finding the optimal roosting altitude during these ascents. Most significantly, swifts have occasionally been reported showing this behaviour at dawn as well as dusk, suggesting a function unrelated to roosting. To investigate this phenomenon more

of the birds ascending to high altitudes at dawn as well as dusk. Identifying suitable altitudes for roosting thus cannot be the sole function of these ascents.

So what is the function of these high-altitude forays? One possibility is that the swifts are getting their bearings and establishing their position in the landscape. Birds are known to make use of several sources of visual information – both terrestrial and celestial – for navigation, and twilight is a good time for them to orientate themselves since distant landmarks as well as stars are visible. Flying at altitude greatly increases the area of the Earth's surface visible to birds, and some passerines are known to show comparable behaviour during long-distance migrations.

These ascents may also provide the swifts with opportunities to assess current and future weather conditions. The availability of the flying insects on which swifts feed is strongly dependent on variables such as temperature, wind and rainfall, and information gained by traversing a range of altitudes could, in theory, help birds track areas of favourable weather and high insect availability.

No doubt future studies will resolve this question, and along the way provide even more surprises about the airborne lives of swifts.

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### SO WHAT IS THE FUNCTION OF THESE HIGH-ALTITUDE FORAYS? ONE POSSIBILITY IS THAT THE SWIFTS ARE GETTING THEIR BEARINGS AND ESTABLISHING THEIR POSITION

thoroughly, the researchers used a Doppler weather radar station in the Netherlands to track swifts' flight altitudes. The resolution was such that swifts could be differentiated from other flying birds on the basis of their wing-beat frequencies, measured by the rapid changes in their radar cross-sections as they flapped.

As expected, the swifts typically climbed to around 2 500 metres above the ground in the twilight after sunset, before descending to lower altitudes to roost. But this behaviour was then repeated before sunrise, confirming anecdotal observations

**E**xtrême flyers of the bird world, Common Swifts *Apus apus* spend almost their entire lives on the wing. They feed, mate and sleep in the air, landing only to breed. Many aspects of their behaviour and ecology remain poorly understood, but the availability of increasingly sophisticated radar systems has opened many doors to ornithologists. Recent studies using this technology have provided hitherto-impossible insights into the aerial lifestyle of these remarkable birds.

One study, reported in the journal *Animal Behaviour* in 2013, provides intriguing new information on flight patterns. The authors, a team of Dutch and Swedish scientists, were particularly interested in the swifts' behaviour around sunset, when the birds form social flocks, known as 'screaming parties', before ascending to higher altitudes. Previous work has revealed that the swifts climb as high as 2 500 metres above the ground during these twilight ascents, before descending

*Reference:* Dokter, A.M. et al. 2013. 'Twilight ascents by Common Swifts, *Apus apus*, at dawn and dusk: acquisition of orientation cues?' *Animal Behaviour* 85(3): 545–552.