SHORT NOTE: Nocturnal calling by a Pied Flycatcher on arrival in breeding habitat during spring migration

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The Pied Flycatcher *Ficedula hypoleuca* is a long distance migrant which still breeds in high densities in mid-Wales, despite the species' UK-wide population decline of >50% in just 25 years (Eaton *et al.* 2015). Pied Flycatchers winter in West Africa and generally return to their Welsh breeding grounds in mid-late April. Males typically arrive first, in order to establish and defend breeding territories prior to the arrival of the females several days later (Cramp & Simmons 2004, Lundberg & Alatalo 2010).

Pied Flycatchers are visual foragers and are diurnally active during most of their annual cycle, with the exception of their migration flights which like many songbird species are undertaken nocturnally (Martin 1990). Much research has been conducted on the behavior and ecology of the Pied Flycatcher, including the timing of migration and arrival on the breeding grounds, but there appears to be no record in the literature of this species vocalizing at night (Cramp & Simmons 2004, Lundberg & Alatalo 2010). This record documents the nocturnal calling of a Pied Flycatcher on arrival in breeding habitat in spring.

On the 3rd of April 2017 a Pied Flycatcher was heard calling from 22:35 BST (21:35 GMT) in an area of woodland at Llysdinam Field Centre near Newbridge-on-Wye, mid Wales (52.216°N, 3.451°W). This location has a long tradition of Pied Flycatcher monitoring based on a nestbox scheme first established in 1911 (Slater 1998, 1999), and the bird was calling from a location which normally holds a Pied Flycatcher breeding territory. Sunset on this date was 19:51 BST, and civil dusk twilight ended at 20:26 BST.

The calling Pied Flycatcher appeared to be a newly arrived individual, as this was the first record of a Pied Flycatcher at the Field Centre in spring 2017, and none were seen or heard in the area during the preceding three days (personal observations by FS who was running a course at the Field Centre 31st March to 2nd April), including during fieldwork in the same area of woodland during the preceding day between 16:00 and 17:00 BST (JS, LB, SC, personal observations). Furthermore, the earliest Pied Flycatchers to be recorded in the county (Powys) in 2017 were reported only the previous day near the village of Beulah, 11.5km from Llysdinam (www.brecknockbirds.co.uk, report by Andrew Dally 2nd April 2017).
At the time of the observation on 3rd April 2017 there was light drizzle and the external lights were on at the Field Centre, illuminating limited sections of the surroundings, which were otherwise not subject to noticeable light pollution or “skyglow”. The Pied Flycatcher was first heard calling at 22:35 BST and a sound recording was made of the call with an iPhone; the call was distant, but clearly audible on the recording (Cramp & Simmons 2004, Lundberg & Alatalo 2010). The sound file was immediately messaged to RT for confirmation of the identification by comparison with the audio recordings available in the xenocanto.com archive.

A short acoustic playback test was then carried out by playing Pied Flycatcher calls using the first two such recordings available in the Xeno-Canto archive at the time (both were recorded in Spain by José Carlos Sires on 20th September 2016). The bird did not approach the speaker but appeared to call in response to the playback, from multiple locations covering a diameter of ~50m as it moved around within the woodland. Given the changing locations from which calls were heard it is possible that there more than one bird may have called, but this was not verified. The bird did not approach the speaker but carried on calling until 23:00 BST, after which no more responses to playback were obtained.

On the next day (4th April) bird surveys were undertaken in the same area at Llysdinam Field Centre, and at nearby woodlands 2.5 Km from Llysdinam (Coed Ty Mawr, 52.205ºN, -3.487ºW). No Pied Flycatchers were found at Llysdinam, but at least three newly arrived males were on territories in Coed Ty Mawr. Subsequent surveys revealed Pied Flycatchers to be present continuously from 4th April at Coed Ty Mawr, and from 6th April at Llysdinam. The first 2017 spring arrival at Llysdinam on the evening of the 3rd April was 10 days earlier than in the previous year (13th April 2016) and substantially earlier than the long-term mean arrival date for the location, of 9th-11th April (FS personal observations).

Taken together, the early date, the absence of Pied Flycatchers in the preceding days at Llysdinam and the nearby woodlands of Coed Ty Mawr, and the presence of Pied Flycatchers in subsequent days, suggests that the Pied Flycatcher calling on the night of the 3rd of April was a newly arrived male, which may have moved on from Llysdinam the same night or the following morning. To our knowledge, this is the first record of nocturnal calling by a newly arrived Pied Flycatcher during spring migration.

Nocturnal calling is regular among some species of songbirds that migrate in loose flocks, such as Redwings Turdus iliacus, which call in flight in order to maintain contact with the rest of the flock (Cramp & Simmons 2004, Hamilton 1962, La 2012). Other species such as Common Nightingales Luscinia megarhynchos sing at night from breeding territories, primarily in order to attract nocturnally migrating females into the breeding territory during –or following- arrival (Amrhein et al. 2002, Roth et al. 2009), and switch to primarily daytime singing once they have acquired a mate (Cramp & Simmons 2004, Amrhein et al. 2002, Thomas 2002). The Pied Flycatcher calls reported here were given from perches within suitable breeding habitat. However, in
contrast to habitat specialists such as Reed Warblers *Acrocephalus scirpaceus*, habitat generalists such as Pied Flycatchers do not appear to use acoustic information, including song, as a cue for recognition of suitable habitat (Mukhin et al. 2008). However, song rate is used by female Pied Flycatchers as a cue for mate selection (Alatalo et al. 1990). The function of the nocturnal calling that we report here is not known with certainty, but may be a means by which newly arrived males assess the presence of other (male) Pied Flycatchers in the locality. Indeed, this could even be the reason why the calling bird that we observed moved on from the territory at Llysdinam which appeared to be already occupied by another calling bird, though this apparent rival was actually the group of observers with their playback recording.

**References**


