

EDITORIAL

The climate is right for natural history

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There is growing certainty that anthropogenic factors are contributing to the increased frequency of extreme weather patterns (IPCC 2014). In 2013 the UK had its warmest summer since 2006 and it was drier than average over the last 30 years (MET office 2013). However, this was followed by one of the stormiest and wettest winters on record (MET Office/CEH 2014). With a predicted greater frequency of storms, increased rainfall and rising temperature what can we expect to see happening to our flora and fauna in Scotland? Not surprisingly, considerable effort has recently been given to understanding changes in biodiversity attributed to climate (CEH 2014). Much of this work has centred on measuring phenological changes in the environment. Observations on seasonal phenomena go back a long way, well before Linnaeus recorded the first dates of leafing, flowering and leaf fall. In Scotland systematic phenological records date back to the 1850s, when the Curator, James McNab of the Royal Botanic Garden Edinburgh first recorded the flowering dates of more than 60 plants (Harper *et al.* 2004). More recent studies for example, have shown that there has been an advance of spring leafing by six days and delay of leaf fall by five days since the 1960s; timing of egg laying in great tits (*Parus major*) has advanced by almost four days per decade since the 1970s; and phytoplankton blooms are earlier by more than five days per decade from 1960 onwards in Scotland (Mackey *et al.*, 2001; Sparks *et al.* 2006). These records also provide valuable information on the impacts of extreme weather such as winter storms and periods of drought on mortality and reproductive success. This can identify vulnerable species and may allow appropriate management and mitigation to be implemented.

Many of our long term biological data sets are gathered by naturalists. Phenological records continue to be required and there are a number of national recording schemes for you to submit your records: <http://www.naturescalendar.org.uk/>. The Biological Records Centre <https://www.brc.ac.uk/> provides the national

database for terrestrial and freshwater records and supports UK recording schemes. Naturalists also play a key role in documenting the appearance and fate of new species, see: *Proceedings of the Conference on Natives, Aliens and Reintroductions* (this volume).

In the face of extreme weather events and continued environmental change there is obviously a continuing need for good naturalists with the expertise to identify and record both common and rare species. Concerns have been expressed as to the future of plant recording given that botany degrees are no longer offered at UK Universities (see article: *Death knell sounds for botany degrees*. The Garden January 2012). Animal species that are taxonomically difficult to identify may similarly be neglected. The 'climate' is certainly right for natural history and long may it flourish.

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