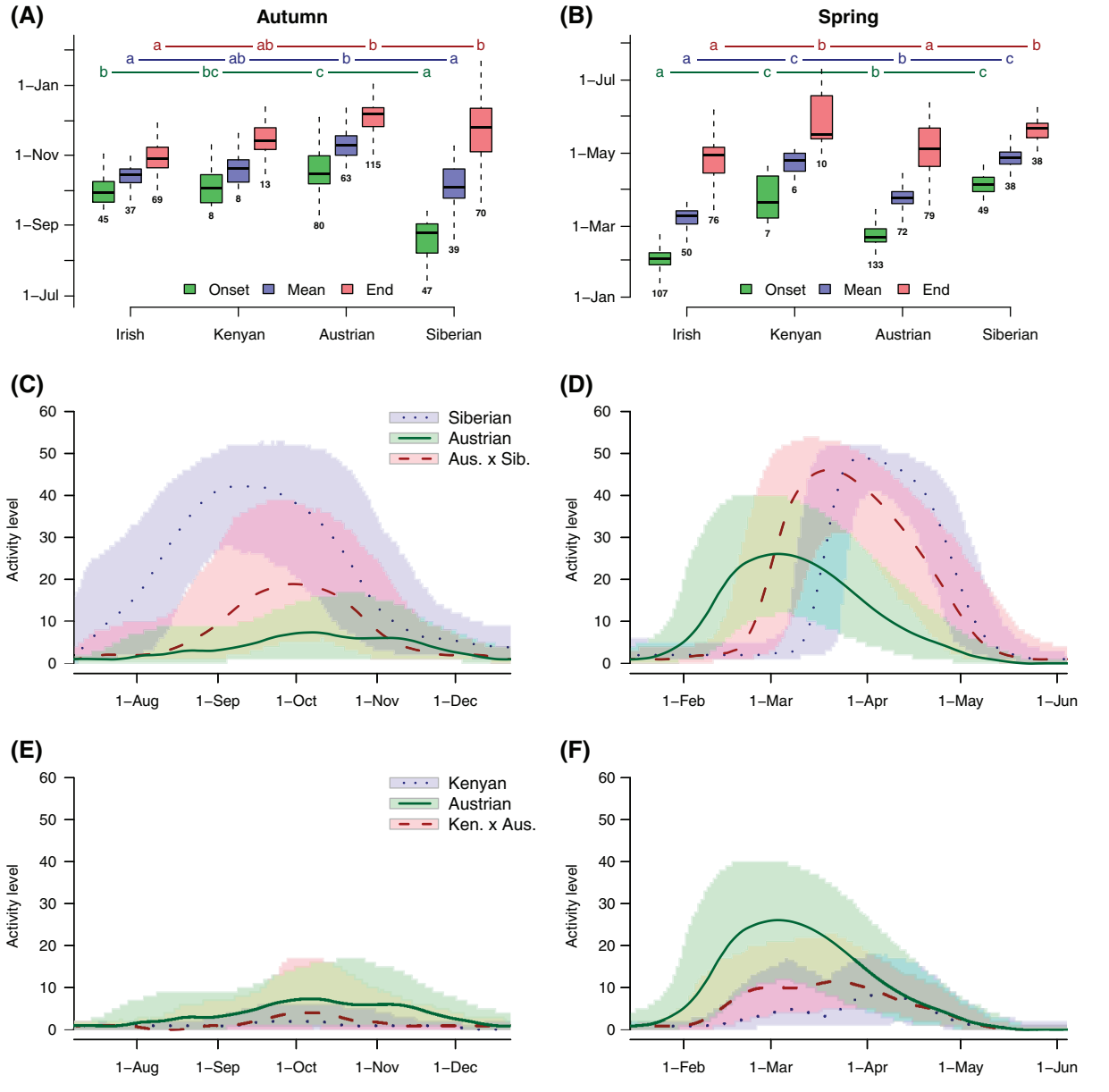

Figure 5. Timing of *Zugunruhe* by population. (A) and (B) show the dates of onset, mean, and end of autumn and spring *Zugunruhe*, respectively, determined with changepoint analysis. Numbers under boxplots show the number of migration periods in the given category; there are multiple migration periods for some birds with multiple years of data. Boxplots show interquartile range, and whiskers extend to the most extreme data point that is not an outlier (see legend of Fig. 2). Outliers are not shown for clarity. Rows of letters at the top of plots indicate significant pairwise differences within each timing category: groups that do not share the same letter are significantly different. (C) to (F): population level activity profiles of hybrids and their parental populations during autumn (C, E) and spring (D, F) migration periods. Activity level is quantified as the number of active ten-minute periods during the night for an individual bird. (C) and (D) compare nocturnal activity in Siberian stonechats, Austrian stonechats, and Austrian × Siberian hybrids. (E) and (F) compare nocturnal activity in Kenyan stonechats, Austrian stonechats, and Austrian × Kenyan hybrids. Lines show medians, and coloured bars show the interquartile ranges (middle 50%) of activity values corresponding to that day. Data shown are smoothed by fully overlapping 30-d windows, incremented by one day.

date did not change with age (effect = 0.24 d, 167.46 DF, $t = 0.19$, $p = 0.8477$).

In autumn, sex had no effect on timing. In spring, we found an effect of sex on onset date, with females showing significantly later onset (effect = 4.57 d, 171.01 DF, $t = 4.46$, $p = 0.0001$) and later mean *Zugunruhe* dates (effect = 2.95 d, 161.28 DF, $t = 2.24$, $p = 0.0265$), but no difference in end dates; overall, females therefore showed shorter spring durations (effect = –6.64 d, 163.39 DF, $t = -2.27$, $p = 0.0247$). We tested for an interaction between sex and population and found that the difference between male and female spring *Zugunruhe* onset dates in Kenyan stonechats was significantly greater than that of the other populations (effect = 30.3 d, 349.66 DF, $t = 4.03$, $p < 0.0001$). There was no significant interaction between population and sex for mean date or duration.