

**Supplementary material**

## Appendix 1

Table A1. Seasonal change in summit metabolism ( $\dot{V}_{O_2} summit$ ) of temperate birds from published data collected from the literature. In nearly all cases the ratio of winter over summer  $\dot{V}_{O_2} summit$  (W/S) reflects comparable elevation of peak metabolic rate during winter.

Species	W/S	Source
Black-capped Chickadee	137	Swanson & Liknes, 2006
Black-capped Chickadee	133	Cooper & Swanson, 1994
American Goldfinch	131	Liknes et al. 2002
American Goldfinch	135	Swanson & Liknes, 2006
House Sparrow	130	Arens & Cooper, 2005
House Sparrow	111	Swanson & Liknes, 2006
Downy Woodpecker	93	Swanson & Liknes, 2006
House Finch	108	Swanson & Liknes, 2006
White-breasted Nuthatch	128	Swanson & Liknes, 2006
Northern Cardinal	135	Swanson & Liknes, 2006
Northern Cardinal	121	Sgueo et al., 2012