

The Peaks of Otter Salamander (*Plethodon hubrichti*; POS) is a montane species found at elevations above 442 m within a 117 km<sup>2</sup> area of the Blue Ridge Mountains in central Virginia, USA. In allopatric areas (areas without the Eastern Red-backed Salamander, *P. cinereus*, a potential competitor), salamander condition was hypothesized to be optimal at elevations near 1000 m and then decrease below and above this elevation. Decreased condition at lower elevations would most likely be due to increased temperatures and lower humidities, which may adversely affect the ability of salamanders to forage effectively. Decreased condition at elevations above the optimum would likely be caused by a shortened active season due to the colder temperatures at these elevations. In October 2018, *P. hubrichti* were collected by turning over rocks and logs at eight sites ranging in elevation from 518 to 1143 m. The mass and snout-vent-length (SVL) of females were recorded at each elevation. From the SVL and mass data, residual salamander condition index was calculated, which was then regressed against elevation. Average condition declined from a high of 0.24 at 1128 m to a low of -0.15 and -0.03 at 518 and 1143 m, respectively. This information indicates that the optimal elevation for the POS is around 1128 m. Based on these results, the residual condition index is a simple method for assessing the effects of elevation. It can also be used as a surrogate measure for density and reproductive output since they follow similar trends across elevations. In the future, we plan to evaluate the condition of an isolated population of POS near White Oak Ridge as well as explore, in more detail, salamander condition near the optimal elevation.