

The Peaks of Otter Salamander (*Plethodon hubrichti*; POS) is found at elevations above 442 m within 117 km² of the Blue Ridge Mountains in central Virginia. In 2018, POS residual condition index values were calculated using mass and snout-vent-length (SVL) measurements obtained from female salamanders found at eight sites ranging from 518 to 1143 m. At several of these sites, in the spring, eggs/female was also determined. Eggs/females was positively correlated with salamander condition. Salamander condition was found to be optimal at elevations near 1000 m. Decreased condition at lower elevations was likely due to increased temperatures and lower humidities, which adversely affected salamander foraging efficiency. Decreased condition above the optimal elevation was likely caused by a shortened active season due to colder temperatures. Salamander condition was hypothesized to fluctuate not only with elevation but also with precipitation and temperature. Several sites from 2018 were collected again in 2019 (1052 and 1128 m) which allowed us to compare salamander condition across years in relationship to elevation, precipitation and temperature. Data from two sites collected in 2017 (655 and 991 m) were similarly compared to data from 2018. Salamander condition declined across both elevations by 87.5% between 2018 to 2019 where 2018 was cooler and wetter than 2019. In 2017, a year with similar temperatures to 2018 but with less precipitation, the pattern was more complex with decline in condition noted only at one elevation. Salamander condition is more complex than being solely dependent on elevation and is also affected by annual temperature and precipitation. These results support the need for conservation of hardwood forests where POS reside, particularly at low elevations, where salamanders would likely have greater difficulty recovering from notably warm and dry years because of depressed reproduction due to reduced salamander condition under these environmental conditions.