

Title – Surveying the Potential Range Extension of Invasive Mystery Snails within Central Virginia

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Abstract: This proposed study will investigate the potential distribution and prevalence of invasive snails (Mystery Snails) within Central Virginia. Two types of Mystery Snails have been documented within Virginia. These include the Chinese Mystery Snail (CMS) and the Japanese Mystery Snail (JMS). Related studies have documented the CMS in the James River watershed near Richmond, VA, but the extent of the CMS distribution is not well known. CMS differ from other snail species in that they are viviparous. This reproductive characteristic could result in an increase in reproduction and the spread of CMS. CMS can grow up to a shell length of about 65mm, whereas most native snail species range in shell length of 10 to 40mm. This size difference increases the nutritional needs of CMS, which reduces the food availability for native species. The purpose of this study is to survey surrounding sections of the James River and its tributaries to document snail species and any occurrence of CMS. A standard sample size of 75 snails will be collected from each site and identified. Molecular techniques will be used to further identify snails. It is predicted that sites with higher concentrations of CMS will out compete native snails. This study seeks to expand upon existing knowledge of Mystery Snail in-habitation in Central Virginia including an application of findings to the conservation of native freshwater species.

References

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