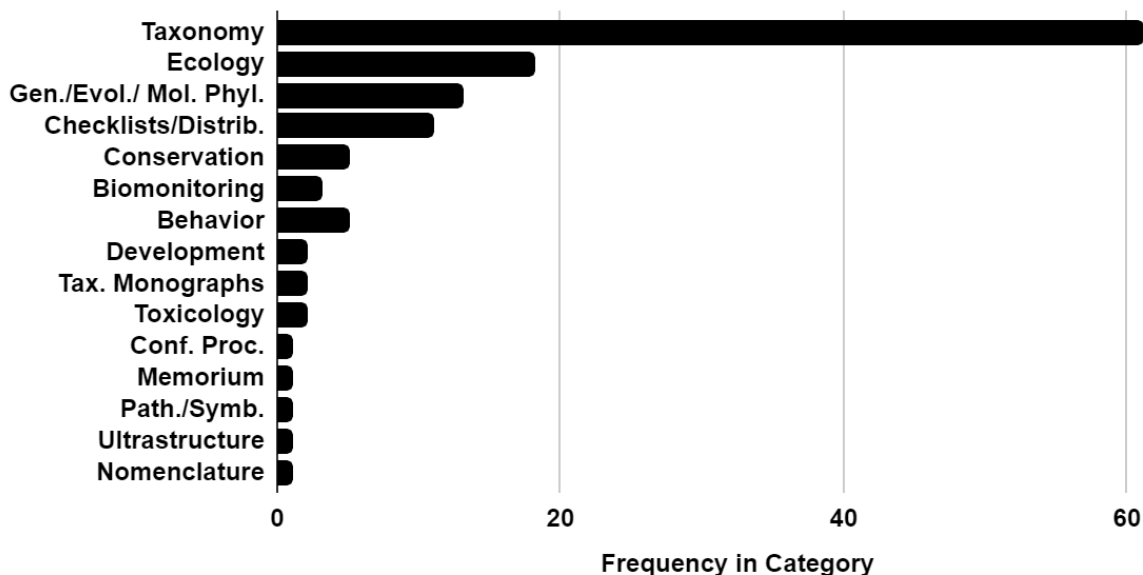


Recent Plecoptera Literature

A total of 127 references were found in the literature with significant attribution to stoneflies. All but three references are 2021 publications. Three 2020 publications came out late in that year and two in the first days of 2022. Compared to the total, 48% of all papers were taxonomic treatments. Ecology was the next largest category with 14%, while Genetics/Evolution/Molecular Phylogeny and Phylogeography contributed 12% of papers. If you wish to have a Bibtext file of the references send a request to dewalt@illinois.edu.



Note that Reding (2020) published a monograph on the stoneflies of the Jura Massif with identification keys for nymphs at genus and species level collected from the French and Swiss Jura Massif. Also note that Roesti (2021) published a monograph of the adult stoneflies of Switzerland. A new species, *Isoperla felderorum* Roesti, 2021 was described in the volume. This volume is richly illustrated, allowing identification of some 126 species. It is also useful to identify adult stoneflies in Austria and Germany.

Some real headway was made in Plecoptera phylogeny this year with South et al.'s (2021a, 2021b) work on a transcriptome-based phylogeny of North American stoneflies. The broader study led to the formal description of a new family, the first since 1987. Kathroperlidae Banks, 1948 ("Kathroperlinae Banks, 1948" was not in anyone's catalog) was characterized morphologically and demonstrated to be distinct from all other Systellognatha families and the distinct Paraperlinae using phylogenomics. An updated key to families in the Systellognatha was produced. Letsch et al. (2021), combined both transcriptomic and Sanger sequence datasets to test timing, place of origin, and subsequent migration of stoneflies. They suggest that ancestral stoneflies originated in the northern hemisphere around 265 Ma (Béthoux et al. put one fossil group into Pennsylvanian around 300 Ma) with the two suborders originating there. They also suggest that both groups dispersed to Gondwana before its breakup with Notonemouridae and Antartoperlaria becoming extinct in the north. Their data set lacks representatives from a few key families, Notonemouridae being one, so there seems room for improvement. Of course, relationships between families and genera are still poorly understood.

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Allocapnia loshada Ricker, 1952 (Capniidae): Virginia, Wythe County, Stony Fork, Hwy 52, Dark Hollow Picnic Area, 36.98198, -81.18729, 21 December 2019, C. Verdone. Photograph by C. Verdone.



Allocapnia loshada Ricker, 1952 (Capniidae): Virginia, Smyth County, unnamed tributary to Bear Creek, National Forest Rd. 6251, Newman Hollow, 36.90664, -81.416476, 20 December 2019, C. Verdone. Photograph by C. Verdone.



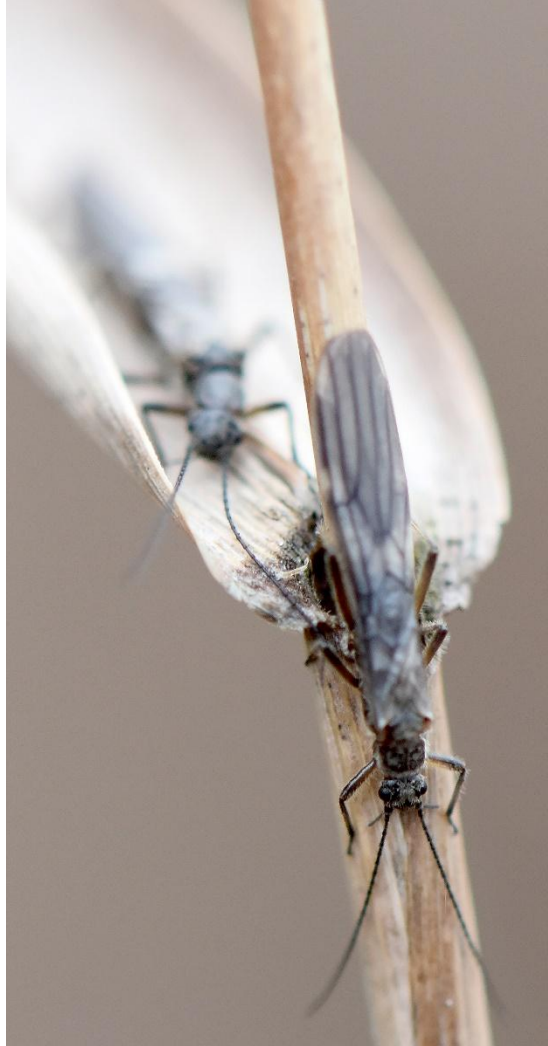
Isoperla pseudosimilis Szczytko & Kondratieff, 2015 (Perlodidae): Virginia, Giles County, spring tributary to White Rock Branch, White Rock Recreation Area, 37.42994, -80.49331, 4 May 2019, Chris Verdone. Photograph by C. Verdone.



Malirekus hastatus (Banks, 1920) (Perlodidae): North Carolina, Alleghany County, unnamed tributary to Big Sandy Creek, Stone Mountain State Park, 36.380699, -81.019635, 7 April 2021, C. Verdone. Photograph by C. Verdone.



Malirekus hastatus (Banks, 1920) (Perlodidae): North Carolina, Alleghany County, unnamed tributary to Big Sandy Creek, Stone Mountain State Park, 36.380699, -81.019635, 7 April 2021, C. Verdone. Photograph by C. Verdone.



Nemocapnia carolina Banks, 1938 (Capniidae): North Carolina, Franklin County, Tar River, Sledge Rd., 35.94110, -78.20310, 15 January 2019, C. Verdone. Photograph by C. Verdone.



Pteronarcys scotti Ricker, 1952 (Pteronarcyidae): North Carolina, McDowell County, Toms Creek, Huskins Branch Rd., 35.77381, -82.05686, 23 May 2021, C. Verdone. Photograph by C. Verdone.



Prostoia besametsa (Ricker, 1952) (Nemouridae): Colorado, Larimer County, Poudre River, Salyer Natural Area, 40.59870, -105.08386, 31 March 2018, C. Verdone. Photograph by C. Verdone.



Skwala americana (Klapálek, 1912) (Perlodidae): Colorado, Larimer County, Poudre River, Salyer Natural Area, 40.59870, -105.08386, 31 March 2018, C. Verdone. Photograph by C. Verdone.



Yugus bulbosus (Frison, 1942) (Perlodidae): North Carolina, Macon County, Long Branch, Upper Nantahala Rd., 35.07527, -83.52727, 26 May 2018, C. Verdone. Photograph by C. Verdone.

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