



# MARÍA DEL CARMEN ZÚÑIGA

## 1944, COLOMBIA

Researcher with expertise in taxonomy of aquatic insects in the Neotropics.

In 2018, she was named Doctor *Honoris causa* by the Universidad del Valle (Colombia) for her interdisciplinary work across biology, engineering and chemistry.

She is founder of the collection of aquatic insects in the Entomology Museum of the Universidad del Valle, one of the biggest ones including neotropical species (around 80000).

### HERSTORY

Her passion for aquatic insects originated in a course on hydrobiology of the Faculty of Engineering.

# TAXONOMY OF AQUATIC INSECTS

Taxonomical studies are still crucial to reveal species distribution and decrease the knowledge gaps in species taxonomy (**Linnean shortfall**) for many groups and in certain regions, as aquatic invertebrates in Neotropical areas.



The work of **María del Carmen Zúñiga** is focused on aquatic insects in Colombia and South America, especially from the families Plecoptera, Trichoptera and Ephemeroptera.

She has described 43 new aquatic insect species: 31 Plecoptera and 12 Ephemeroptera.

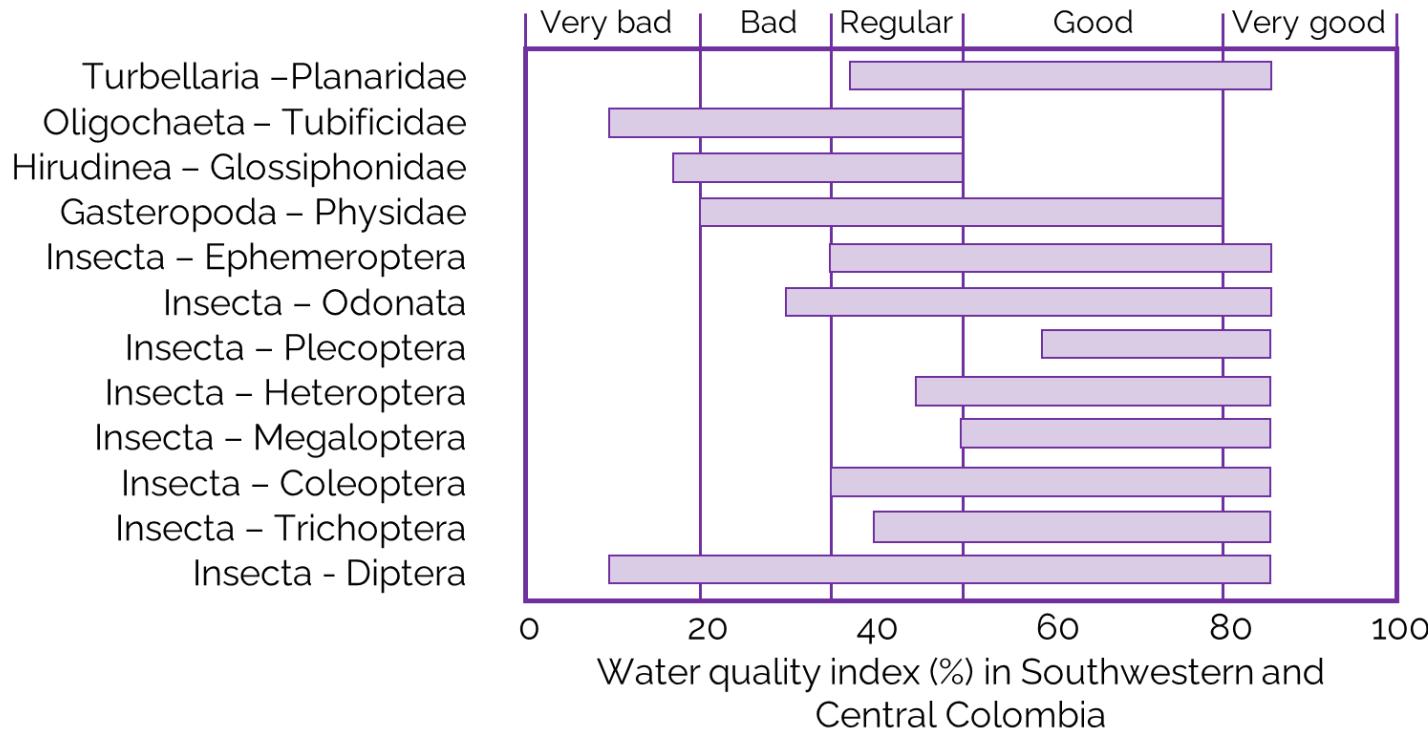


She has published many articles with information about species ecology and distribution in Colombia and South America of several families and genera.

# AQUATIC INSECTS AS BIOINDICATORS OF WATER QUALITY

As some of these taxa are sensitive to habitat degradation and pollutants, they can serve as **bioindicators of water quality**.

**Example:** Index to estimate water quality based on aquatic insects to the groups found in Colombian water bodies (created by M. C. Zúñiga).



# RELEVANT CONTRIBUTIONS

**Zúñiga, M. C.**, Rojas, A., Caicedo, G. (1993). Indicadores ambientales de calidad de agua en la cuencia del río Cauca. Ainsa, 13, 17-28.

**Zúñiga, M. C.** (2010). Diversidad, distribución y ecología del orden Plecoptera (Insecta) en Colombia, con énfasis en *Anacroneuria* (Perlidae). Momentos de Ciencia 7(2), 101-112,

**Zúñiga, M. C.** (2013). Composición de la comunidad de macroinvertebrados acuáticos en pequeñas quebradas de la region andina colombiana, con énfasis en la entomofauna. Dugesiana, 20, 263-277.

Chará-Serna, A. M., Chará, J., Giraldo, L. P., **Zúñiga, M. C.**, David, J. (2015). Understanding the impacts of agriculture on Andean stream ecosystems of Colombia: a causal analysis using aquatic macroinvertebrates as indicators of biological integrity. Freshwater Science, 34, 727-740.

LOOKING  
FOR MORE?

You can find more information about her story and research at:

<https://scholar.google.com/citations?user=zSQDHJQAAAAJ&hl=es>

<https://www.univalle.edu.co/ciencia-y-tecnologia/un-doctorado-por-su-pasion-por-la-ciencia>