

UNDERSTANDING BIOLOGY

This frog (*Pelophylax esculentus*) with its head rising out of a background of duckweed (*Lemna minor*) is more commonly known as the edible frog because it might appear on your plate as the delicacy of French cuisine, “cuisses de grenouilles” or frog legs. *P. esculentus* is interesting biologically because it is not a true species, but rather a hybrid of two other species: *Pelophylax ridibundus* and *Pelophylax lessonae*. These hybrid frogs are fertile, but offspring produced by matings between hybrids often have developmental abnormalities. The hybrid populations are maintained by a complex reproductive system that involves female hybrids transmitting only one genome through meiosis, while the other genome is supplied by sperm from a member of the other ancestral species. This elaborate genetic system maintains the equivalent of a perpetual F_1 hybrid. Originally named *Rana esculentus* by Linnaeus, the edible frog is now known as the *Pelophylax esculentus* complex.



More importantly, this image is symbolic of the pedagogical philosophy underlying *Understanding Biology*. We have heard from our students over the years that they are drowning in a sea of facts. We want students to progress beyond memorization of facts and definitions to an understanding of the rich network of interconnected ideas and principles that are modern biology. We provide a clear learning path for students that emphasizes concepts, and the higher level relationships that make biology a fascinating science. Like the frog emerging from the mat of duckweed, our pedagogical system helps students rise above the overwhelming sea of biological facts to an understanding of biological systems.

**Mc
Graw
Hill
Education**



ISBN 978-0-07-353229-5
MHID 0-07-353229-0



www.mhhe.com