

Check your understanding



1 If mosquitoes are so bad why don't we just kill all of them?

Answer

When even one species disappears, there are great impacts on the ecosystem - and there are more than 3500 species of mosquitoes! At the very least, eliminating these insects could leave predators without a prey. Besides, it is impossible to kill all the mosquitoes, there will always be populations lurking somewhere. Furthermore, the great majority of mosquitoes do not transmit dangerous pathogens, so it would be irrelevant to kill them.

2 How can we prevent mosquito-borne diseases?

Answer

Through mosquito population control, as discussed above; vaccine development, as mentioned; and, very importantly, through mosquito bite prevention by using different repellents and wearing long trousers and sleeves.

3 Can you use MRR (mark-release-recapture) to estimate fish abundance in a lake?

Answer

Yes, this method is useful for a variety of animals, and especially when it is not practical (or possible) to count all the individuals in the population.

4 Why do you think Model M_0 revealed a much larger mosquito abundance than the other 4 models?

Answer

This model doesn't estimate survival, so it presumed all mosquitoes survived. It also doesn't consider the removal of captured individuals. Thus, the model overestimates abundance.