

Summary Report of Self-supported Visit – Tony Jhwueng – July 28-August 17, 2014

Species may evolve on a reticulate network rather than strictly bifurcating tree, but comparative methods to deal with this are lacking. We develop methods to investigate the effect of hybridization on trait evolution. It can separately or jointly detect a bias in trait value coming from hybridization and a burst of variation associated with the hybridization event as well as traditional parameters of Brownian motion or the generalized Ornstein-Uhlenbeck process. We evaluate our methods through simulations and several empirical analyses of reticulate networks of cichlid, tobacco and sunflower, respectively.