# CDPOP troubleshooting

* Why the high diversity by road pattern? Potential causes:
  + High dispersal parameters
    - Dispersal movement
    - Mating movement
    - Dispersal \* Mating movement
      * Need to have at least 10% of max dispersal, or more like 20% for both types of movement in order to maintain diversity.
* High birth rate parameters
  + Lambda for Poisson distribution set at 4
  + Reduce to 3?
* Dispersal \* Birth rate
* IBD and PAN too similar
* Dispersal relative to barrier
  + IBD pixel:Barrier ratio 1:500
  + reduce to 1:100
* Distinguish barrier effects from central landscape effects (central-marginal hypothesis)
* Compare plain IBD with road avoid and roadkill
* Want to have it so that dispersal ability is radius of the area on each side. So if dispersal ability is 100, the cost to cross from outside edge to the barrier should be 200.
* Want to have the barrier set so that no one can cross at m=0 and that there’s no barrier at m=0.5. so the cost of the max barrier at m=0 should be the same as the dispersal ability.
* So someone right next to the barrier still couldn’t cross.
* Would be good to have the area on each side be square so there’s more distance for them to spread out on
* Let’s have it be projected and use real units to make it easier to think about and apply to real situations
* Two square blocks adjacent across road rather than one square bisected by road, so there’s more space for patterns to develop on each side