Novel Transmission Cycle for EEE in the Southeastern US – Abelardo Moncayo

a) Coastal cycle – cypress swamps
   i) Cs melanura
   ii) Birds
   iii) Bridge vectors – *Aedes, Coquilettidia, Anopheles, Culex*
b) Inland cycle – hardwood swamps
   i) Unknown ecology
   ii) Unknown vectors
c) Following up on EEE horse cases
   i) Very few *Cs melanura* in area
   ii) TVA found EEE in mosquitoes – *Cx erraticus*
d) Study
   i) Trinidad mosquito trap - hamster baited
      (1) Arboviral surveillance
      (2) Vector incrimination
      (3) Host incrimination
   ii) Questions
      (1) Is *Cx erraticus* present? YES
      (2) Is *Cx erraticus* attracted to rodents? YES
      (3) Can rodents elicit a viremia? YES
      (4) Can rodents be infected in the field?
   iii) Comparison of CDC light traps and Trinidad traps
      (1) Trinidad traps primarily caught *Cx erraticus*
      (2) Fewer *Cx erraticus* were caught in the Trinidad trap than the CDC light trap
      (3) Diversity was much lower in the Trinidad trap
      (4) Drought issues impacted data
      (5) Recommendation – use CDC light trap initially
   iv) Resting boxes
      (1) Collected June through September
      (2) Caught about 2000 blood fed mosquitoes
      (3) Good data on 5 species
         (a) *Cx erraticus* – mostly mammals, some birds
         (b) *An quadrimaculatus* – primarily mammals
         (c) *Cx nigripalpus* – 2:1 mammals to birds
         (d) *An punctipennis* – mammal feeder
         (e) *Cs melanura* – bird feeder
      (4) Primarily feeding on mammals
         (a) Mostly horses and deer
         (b) Some smaller mammals
         (c) Some reptile feeding – overwintering host??
         (d) Some bird feeding
      (5) *Cx erraticus* appears to be a good enzootic and bridge vector
      (6) *Cx restuans* may also be an important enzootic vector
e) May be seeing a secondary cycle among small mammals/reptiles and *Cx erraticus* in areas where *Cs melanura* are not found

f) What about *Cx salinarius* and *Cx nigripalpus*?
g) Papers
    i) J Med Entomol 46 (4): 862-865 (2009)
    ii) Am J Trop Med Hyg 81 (3): … (2009)