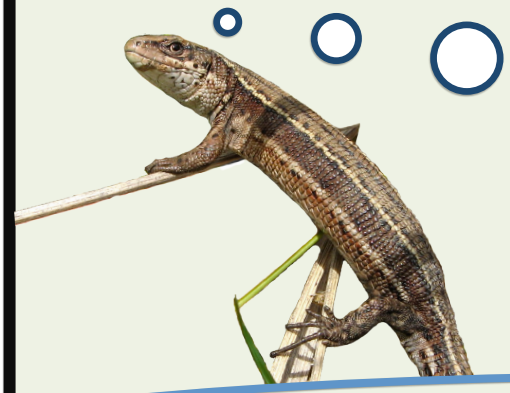
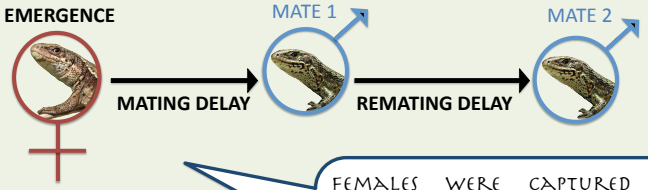
THE EFFECTS OF TEMPORAL VARIATION IN MATE ENCOUNTER ON MATING DECISIONS IN *ZOOTOCA VIVIPARA*

M.C. Breedveld & P.S. Fitze

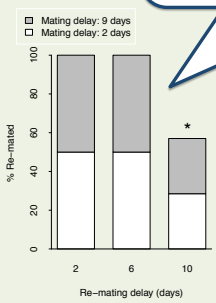


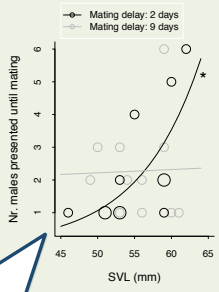
TIME OF MATE ENCOUNTER IN FEMALES



FEMALES WERE CAPTURED UPON EMERGENCE FROM HIBERNATION; PRESENTED TO FIRST MATES 2 OR 9 DAYS AFTER EMERGENCE, AND; PRESENTED TO SECOND MATES 2, 6, OR 10 DAYS AFTER FIRST MATES

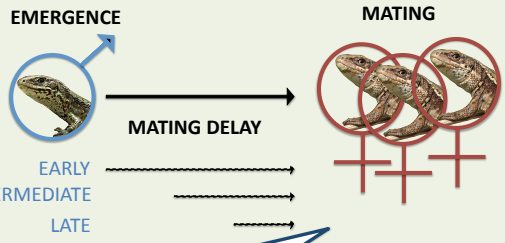
FEMALE MATING PROPENSITY WAS INDEPENDENT OF MATING DELAY; REMATING PROPENSITY DEPENDED ON THE LENGTH OF THE REMATING DELAY; **FEMALES HAVE A MATING WINDOW THAT IS INITIATED AT FIRST MATING!**





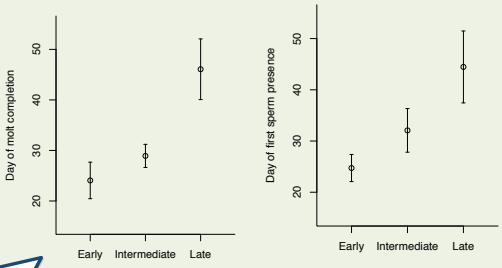
FEMALE SIZE-DEPENDENT CHOOSINESS, BUT ONLY WHEN FIRST MATES ARE ENCOUNTERED EARLY; **TIME DEPENDENT FEMALE CHOICE STRATEGIES!**

TIME OF MATE ENCOUNTER IN MALES



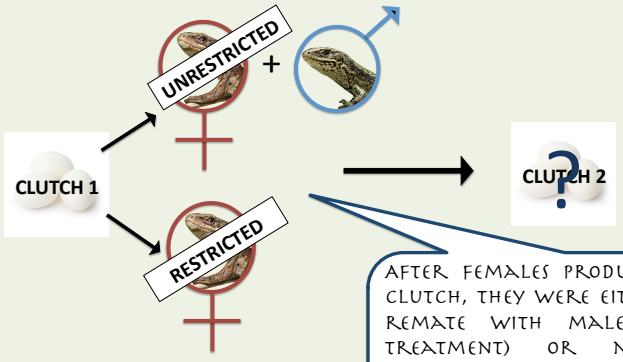
ANIMALS WERE HIBERNATED IN THE LABORATORY; MALES WERE EMERGED 14, 5, OR 1 DAY(S) BEFORE FEMALES (PROTANDRY TREATMENT); AND MATING TRIALS PERFORMED

MALE MATING PROPENSITY WAS INDEPENDENT OF TREATMENT, BUT SPERM MATURATION AND MOLTING WERE TIME DEPENDENT OF EMERGENCE; **UNPREPARED MALES MATE ANYWAY, DEMONSTRATING THE FITNESS BENEFITS OF PROTANDRY!**

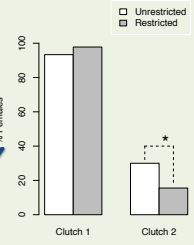


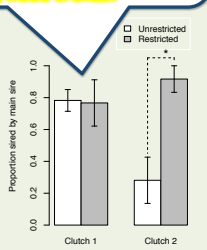
MAIN SIRES OF FIRST CLUTCHES SIRED LESS EGGS IN SECOND CLUTCHES OF UNRESTRICTED FEMALES (AND MALES THAT REMATED ACHIEVED HIGHER REPRODUCTIVE SUCCESS; **REMATING IS IMPORTANT FOR MALES!**

MATE ENCOUNTER AFTER THE FIRST CLUTCH



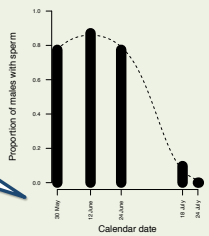
THE PROBABILITY OF LAYING A SECOND CLUTCH (AND THE PROBABILITY THAT IT CONTAINED VIABLE EGGS) WAS SIGNIFICANTLY HIGHER IN UNRESTRICTED FEMALES; **REMATING IS IMPORTANT FOR FEMALES!**





AFTER FEMALES PRODUCED THEIR FIRST CLUTCH, THEY WERE EITHER ALLOWED TO REMATE WITH MALES (UNRESTRICTED TREATMENT) OR NOT (RESTRICTED TREATMENT); SECOND CLUTCH PRODUCTION, FERTILIZATION SUCCESS, AND THE TEMPORAL PATTERN OF MALE SPERM PRESENCE WERE EXAMINED

SPERM PRESENCE WAS HIGH UNTIL THE END OF JUNE; **MALES CAN INDEED FERTILIZE AFTER FIRST CLUTCH PRODUCTION!**



WE ARE VERY GRATEFUL FOR THE SUPPORT AND COLLABORATION OF: MIGUEL PEÑALVER-ALCÁZAR, CRISTINA ROMERO-DÍAZ, LUIS SAN-JOSÉ, VIRGINIA GONZÁLEZ, AND SÉBASTIEN BIOLLAY

M.C.B. WAS SUPPORTED BY A PHD. GRANT (JAEPRE_09_01372) FROM THE CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (CSIC) AND CO-FINANCED BY THE EUROPEAN SOCIAL FUND, AND A CONTRACT FUNDED BY THE SPANISH MINISTRY OF EDUCATION AND SCIENCE (CGL2012-32459 TO P.S.F.). PROJECT FUNDS WERE PROVIDED BY THE SPANISH MINISTRY OF EDUCATION AND SCIENCE (CGL2008-01522 TO P.S.F.) AND THE SWISS NATIONAL SCIENCE FOUNDATION (PPOOP3_128375 TO P.S.F.). THE STUDIES COMPLY WITH THE CURRENT SPANISH LAWS AND WITH ASAB/ABS GUIDELINES FOR THE TREATMENT OF ANIMALS IN BEHAVIOURAL RESEARCH. CAPTURE AND EXPERIMENTATION LICENSES WERE APPROVED BY THE GOBIERNO DE ARAGÓN AND NAVARRA.