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Patty, R.A. University of Nebraska, Lincoln, Nebraska. Durations of copulation in some recent "eastern" and "western" strains of *D. athabasca*.

As reported by Miller (1958, Evolution 12: 72-81) and Miller and Westphal (1967, Evolution 21: 471-492), "western" *D. athabasca* has relatively long durations of copulation, "eastern" *athabasca* relatively short copulation times, with little overlapping (some long copulation

times only in a derivative of the Carbon County, Pennsylvania, strain of "eastern" *athabasca* - Miller and Westphal, 1967). Strains from several new western and eastern localities have recently been acquired (the latter from collections by Drs. George Hooper and Max Levitan, via Dr. R.A. Voelker); these have been identified as "western" or "eastern" *athabasca* on the basis of geographical source, Y chromosome type, salivary gland chromosome patterns (by Drs. Miller and Voelker). As part of an attempt to reinvestigate the genetic basis of copulation time variation in *athabasca*, observations of copulations have recently been made, employing approximately 1-week old flies aged in isolation and observed at 70-80°F. The following table gives observed values (it also includes recent observations with the old Carbon County and Duluth strains used by Miller and Westphal, 1967):

"Western" *athabasca*:

Minnesota (Bass Lake): 6'21", 7'15", 10'18", 12'46", 15'32", 17'56" (\bar{x} = 11'41").
 Minnesota (Duluth): 6'37", 7'37", 7'58", 8'00", 8'55", 9'15", 10'50" (\bar{x} = 8'28").
 Wyoming (Medicine Bow Natl. Forest): 6'33", 6'52", 8'28", 9'10", 9'46", 9'50", 10'20", 10'55", 11'15", 16'26", (\bar{x} = 9'58").

"Eastern" *athabasca*:

Massachusetts (South Williamstown): 0'55", 1'07", 1'08", 1'11", 1'22", 1'24", 1'30", 1'34", 1'45", 1'53", 2'09", 2'25", 2'28" (\bar{x} = 1'36").
 New Jersey (Englewood): 1'12", 1'20", 1'21", 1'27", 1'36", 1'39", 1'47", 2'22" (\bar{x} = 1'54").
 New York (Poughkeepsie): 0'34", 0'45", 0'53", 1'02", 1'03" (2), 1'05", 1'07", 1'09", 1'10" (2), 1'11", 1'14", 1'18", 1'19", 1'33", 1'46", 1'56", 1'57" (\bar{x} = 1'13").
 Pennsylvania (Allentown): 1'58", 2'05", 5'54" (\bar{x} = 3'19").
 Pennsylvania (Carbon County, Jim Thorpe): 0'41", 0'56", 1'20", 1'21", 1'34", 1'43", 1'46", 1'55", 2'03", 2'07", 2'19", 2'30", 2'37" (2), 2'44", 2'55", 3'40", 3'48", 4'57" (\bar{x} = 2'17").
 Pennsylvania (Philadelphia): 1'16", 1'24", 1'25", 1'35", 1'55", 2'03", 2'25", 2'35", 2'39", 2'54", 2'57", 3'19", 6'47" (\bar{x} = 2'33").

The range of copulation times for "eastern" *D. athabasca* from Allentown, Philadelphia, and Carbon County, Pennsylvania, exceeded the upper limit of 2'29" found by Miller and Westphal (1967) in most of their "eastern" strains. The lower limit for copulation time in "western" strains was observed to be 6'21" (Bass Lake, Minnesota) and the upper limit for the "eastern" strains 6'47" (Philadelphia). Thus, an overlapping of copulation times of "western" and "eastern" *athabasca* is confirmed, though most strains continue to conform to the earlier impression of nonoverlapping long and short copulation times for "western" and "eastern" *athabasca* respectively.