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BUTTERFLIES AND SKIPPERS CROSSING THE JAMES RIVER IN SPRING---Each spring from 1997-2004, I have conducted a hawkwatch on the north shore of the James River in James City County, three miles southeast of the City of Williamsburg, where College Creek empties into the river. This study has documented that the site is a water-crossing route for migratory hawks, vultures, and many other bird species (Taber, 1997, 2002). It appears to also be a significant route for butterflies and skippers. A northward-pointing finger of land, on the south shore at Hog Island Wildlife Management Area, in Surry County, creates a dominant landmark at a sharp bend in the river. It is a convenient feature, which ushers northbound wildlife across the 2.4 km expanse of water.

I conduct the hawkwatch, often with one or two other volunteers, almost daily throughout March, April, and May, generally from mid-morning until early afternoon, because that is when the hawks are typically

migrating past the site. The watch is not conducted during steady rain. Weather conditions are always recorded. I had noticed butterflies and skippers crossing the river at the site for years, but in 2004, I decided to pay more attention to the numbers and species making the water-crossing than I had in the past. As with the hawks, I have not observed butterflies and skippers flying south across the river; rather, there is a steady northbound movement. Many of the butterflies and skippers are quite distant, seen through binoculars and scopes, as we scan for hawks, and are often unidentifiable to species. Some, however, are seen crossing the river and then conveniently land near the hawkwatch, on the sand and on flowers and are identified that way.

Throughout April and May 2004, butterflies and skippers were seen crossing the river almost daily, during sunny weather and moderate southerly winds. By far, the most numerous species seen was Eastern Tiger Swallowtail (*Papilio glaucus*), perhaps due to its large size and easy identification. This phenomenon deserves further study to reveal more about this apparent short-range dispersal strategy of a non-migratory species. The second most numerous species seen was Silver-spotted Skipper (*Epargyreus clarus*). Other species identified crossing the river included Black Swallowtail (*Papilio polyxenes*), Cabbage White (*Pieris rapae*), Sleepy Orange (*Eurema nicippe*), Cloudless Sulphur (*Phoebis sennae*), American Lady/Painted Lady (*Vanessa virginiensis/cardui*) (these species are difficult to identify on the wing though only American Lady was seen on the shore), Question Mark/Comma (*Polygonia interrogationis/comma*), Red Admiral (*Vanessa atalanta*), American Snout (*Libytheana carinenta*), and Monarch (*Danaus plexippus*). Many unidentified small butterflies and skippers were noted. Near the end of the 2004 study period, in late May, hundreds of dragonflies were also observed crossing the river on some days.

Some days of particularly noticeable movement across the James River were documented in 2004 as follows (high temperature and wind in parentheses):

4 March (15 C, light SE): several butterflies, including some American Snouts

25 March (13 C, light SE): several American Snouts and a few unidentified species

26 March (15 C, light SW): dozens of unidentified butterflies

27 March (16 C, light SW): dozens of unidentified butterflies

19 April (21 C, light SW): dozens of Eastern Tiger Swallowtails and one Sleepy Orange

20 April (16 C, light SW): dozens of Eastern Tiger Swallowtails and dozens of unidentified butterflies

23 April (21 C, moderate SW): several Eastern Tiger Swallowtails and several unidentified butterflies

7 May (21 C, moderate SW): several Silver-spotted Skippers, one Cloudless Sulphur, and several unidentified butterflies

13 May (22 C, strong SW): hundreds of Eastern Tiger Swallowtails, several Silver-spotted Skippers, and dozens of unidentified butterflies

17 May (24 C, moderate SW): dozens of Eastern Tiger Swallowtails, several Silver-spotted Skippers, and dozens of unidentified butterflies

Butterfly movements, including random dispersal and actual migration, are not well understood, although species regarded as moving north in spring and summer in eastern North America include Monarch, Cloudless Sulphur, Painted Lady, Red Admiral, Sleepy Orange, and Question Mark (Glassberg, 1999). According to Opler (1992), American Snout "sometimes engages in huge migrations" and regarding American Lady, he stated, "whether or not adults can survive cold winters is not clearly documented and it may be necessary for migrants to colonize much of the East each year." Further study at water-crossing sites, such as College Creek may help to shed some light on patterns of spring movement in butterflies and skippers.

Literature Cited

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