

SCELIPHRON CAEMENTARIUM (DRURY), A MUD DAUBING WASP

(HYMENOPTERA: SPHECIDAE)<sup>1</sup>

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**INTRODUCTION:** THE TERM MUD DAUBER IS APPLIED TO SEVERAL WASPS WHICH MAKE MUD NESTS, BUT IT IS MOST COMMONLY ASSOCIATED WITH SCELIPHRON CAEMENTARIUM (DRURY). THE GENUS SCELIPHRON HAS 3 NEARCTIC SPECIES, OF WHICH ONLY S. CAEMENTARIUM OCCURS IN FLORIDA. THIS BLACK AND YELLOW, THREAD-WAISTED WASP IS DISTINCTIVE AND OFTEN FIRST NOTICED BECAUSE OF THE MUD NESTS WHICH IT CONSTRUCTS UNDER ROOF EAVES. IN FACT, THE NESTS OF S. CAEMENTARIUM ARE SO COMMONLY ASSOCIATED WITH MAN-MADE STRUCTURES (BRIDGES, BARN, HOMES) THAT THE NATURAL HABITAT IS VIRTUALLY UNKNOWN! THE MUD DAUBER IS A SOLITARY WASP WITH ONE FEMALE PER NEST, AS CONTRASTED WITH HORNETS AND YELLOW JACKETS WHICH ARE SOCIAL WASPS GENERALLY HAVING SEVERAL TO MANY FEMALES PER NEST. WHILE THESE LATTER INSECTS ARE EASILY PROVOKED TO STING, SCELIPHRON IS CONTENT MERELY TO GIVE A FEW WARNING BUZZES OF ITS WINGS, ALTHOUGH IT MAY STING WHEN ROUGHLY HANDLED. G. D. SHAFER, WHO WROTE AN INTERESTING LITTLE BOOK, THE WAYS OF A MUD DAUBER, INDUCED SCELIPHRON TO FEED ON HONEY DABBED ON HIS FINGERTIPS.

**DESCRIPTION:** S. CAEMENTARIUM IS A LARGE WASP, 2 TO 3 CM IN LENGTH. IT IS PREDOMINATELY MAT BLACK WITH A FEW YELLOW AREAS ON THE THORAX AND FIRST TERGUM OF THE ABDOMEN. THE LEGS ARE PARTLY YELLOW AND THE WINGS DEEP AMBER. IT HAS A RATHER BULBOUS ABDOMEN ATTACHED TO THE THORAX BY A THIN PETIOLE ABOUT EQUAL IN LENGTH TO THE BULBOUS PORTION (FIG. 1).

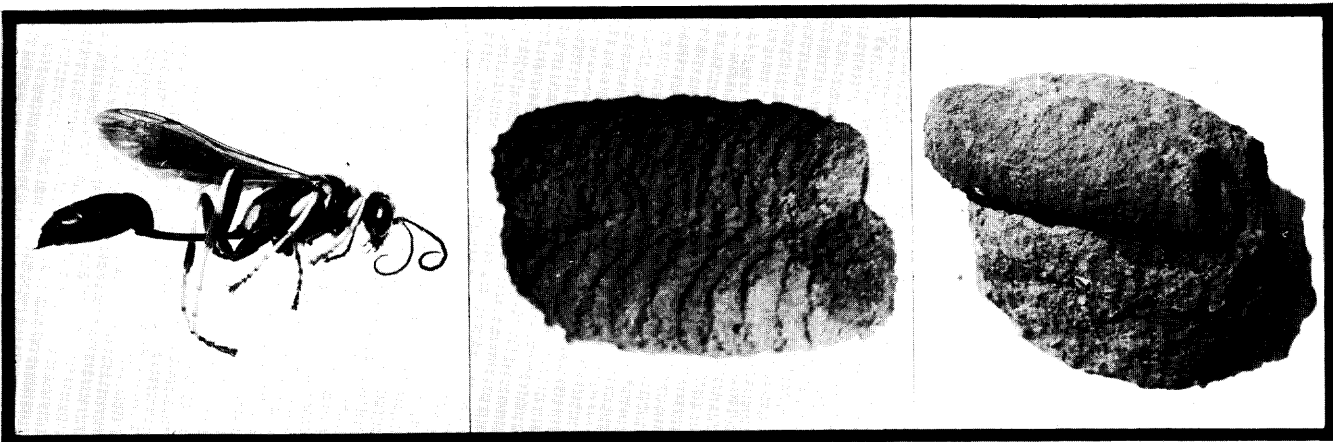


FIG. 1: ADULT FEMALE SCELIPHRON CAEMENTARIUM. FIG. 2: PARTIALLY COMPLETED SCELIPHRON NEST.  
FIG. 3: COMPLETED NEST.

**DISTRIBUTION:** S. CAEMENTARIUM OCCURS THROUGHOUT THE UNITED STATES, SOUTHERN CANADA, MEXICO, CENTRAL AMERICA, AND THE WEST INDIES (BOHART AND MENKE, 1963). IT HAS BEEN INTRODUCED INTO HAWAII, THE MARQUESAS, SOCIETY, SAMOA, FIJI, MARSHALL, AND MARIANA ISLANDS (WILLIAMS, 1947; KROMBEIN, 1949), JAPAN, AND PERU (VAN DER VECHT AND VAN BREUGEL, 1968).

**BIOLOGY:** ADULT WASPS EMERGE IN THE SPRING AFTER OVERWINTERING ABOUT 9 MONTHS AS LARVAE OR PRE-PUPAE. AFTER CHEWING ITS WAY OUT OF THE MUD CELL, THE WASP SPENDS A FEW DAYS EXPLORING AND FEEDING UPON NECTAR. AFTER THIS PERIOD, THE FEMALE MATES AND SEARCHES FOR A SOURCE OF MUD TO BEGIN CONSTRUCTION OF HER NEST. IT IS NOT UNCOMMON TO SEE THESE BLACK AND YELLOW WASPS AT MUD PUDDLES, ABDOMEN ANGLED UPWARDS, GATHERING BALLS OF MUD IN THEIR MANDIBLES. SEVERAL DOZEN TRIPS ARE MADE FROM THE MUD SOURCE TO THE NEST SITE UNTIL A CELL 3-4 CM LONG IS CONSTRUCTED. THE FEMALE THEN SEARCHES FOR SPIDERS, WHICH SHE PARALYZES WITH HER STING AND CARRIES BACK TO THE CELL. UP TO 20 SPIDERS MAY BE STORED PER CELL. AN EGG IS LAID ON A SPIDER NEAR THE BASE OF THE CELL, AND THE CELL IS CAPPED WITH A MUD PLUG. AFTER COMPLETION OF ONE CELL, ANOTHER IS BEGUN UNTIL SEVERAL HAVE BEEN COMPLETED AND PROVISIONED. THE CELLS HAVE A CHARACTERISTIC RIDGED APPEARANCE AT THIS POINT (FIG. 2). THE ENTIRE ASSEMBLAGE OF CELLS IS FINALLY COATED WITH A THIN LAYER OF MUD AND SMOOTHED OVER (FIG. 3). ADULTS MAY LIVE AS LONG AS 3 MONTHS, WITH 1 TO 3 GENERATIONS PER YEAR POSSIBLE.

**HOSTS:** THE IMMATURE WASP DEVELOPS UPON SPIDERS WHICH THE ADULT FEMALE FINDS ON FOLIAGE AND FLOWERS (RAU, 1935). THE EXACT CHOICE OF SPIDER PREY IS DETERMINED LARGELY BY ITS HABITAT, ABUNDANCE, SIZE, AND SEASON (MUMA AND JEFFERS, 1945).

**ECONOMIC IMPORTANCE:** WHILE MUD DAUBERS ARE CAPABLE OF STINGING, THE PRIMARY OBJECTION TO THEM LIES IN THE REALM OF NUISANCE. HOMEOWNERS MAY OBJECT TO THE MUD NESTS LIBERALLY PLASTERED TO

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THEIR HOMES. IF UNUSUALLY NUMEROUS, THESE NESTS MAY BE SCRAPED OFF, THUS AT LEAST PARTIALLY REDUCING THE NEXT GENERATION. IF CHEMICAL CONTROLS ARE NECESSARY, THE DEPARTMENT OF ENTOMOLOGY AND NEMATOLOGY, UNIVERSITY OF FLORIDA, IFAS, RECOMMENDS A 2% CHLORDANE EC SPRAY. THIS SPRAY SHOULD BE APPLIED TO ALL SUITABLE AREAS UPON WHICH WASPS WILL BUILD THEIR NESTS. TIMING IS VERY IMPORTANT. DPI ENTOMOLOGISTS HAVE TESTED CHLORDANE AS A PREVENTIVE SPRAY FOR THE PAST 5 YEARS AND FOUND THAT A SPRAY SUFFICIENT TO WET THE SURFACE, APPLIED ON OR ABOUT APRIL 1 AND JULY 15, WILL PREVENT THIS WASP FROM BUILDING ITS NESTS ON TREATED SURFACES.

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