

The Odonata of Lebanon

(Insecta: Odonata)

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Abstract. In a year-long survey of the Odonata of Lebanon, 29 species of the approximately 49 known or expected to live in the country were recorded. Some endangered species should be considered for urgent protection. Others are doing well. A brief biogeographic analysis of the fauna is given. The almost complete absence of species typical of semi-arid to arid environments is to be noted.

Key words. Lebanon, Odonata, biogeography, river ecology.

Introduction

With a surface area of approximately 10,400 km², Lebanon is a small country but offers a variety of relief and local climate. Most of the country is hilly or mountainous, with the exception of a narrow coastal plain and the Beka'a valley, contained between the Lebanon and Anti-Lebanon ranges, and close to the northern end of the Great African Rift. The climate is Mediterranean, with a yearly average temperature of ca 20°C, but locally strongly modified by altitude. Summers tend to be hot and dry, winters wet and cool. Snowfall and below-zero temperatures are common in the mountains, which locally reach over 3,000 m a.s.l. Precipitation is relatively high (average ca 600 mm per annum), except locally in the north-east, but on the whole, the country is well watered and well endowed with rivers. The principal rivers are the Litani, which springs on the eastern side of the Beka'a valley, and the Orontes (Asi), which springs close to it, as well as a number of shorter, coastal rivers, about 18 in all (DIA 1998). In contrast to its neighbouring countries Syria and Iraq, no water is received from outside countries, while the Orontes (Asi River) evacuates water to Syria and Turkey. Nevertheless, competition for water is on the increase, and surface water quantity is decreasing, while its quality is degrading (BOU-ZEID & EL FADEL 2002), as has happened in the Jordan valley (SCHNEIDER 1981a). Aquatic life, plant and animal alike, are suffering from this, and dragonflies, the "guardians of the watershed" (CLAUSNITZER & JODICKE 2004), are prominent among the early victims of water quality degradation.

Therefore, we here update the current knowledge on Lebanese Odonata, especially since there has been no contemporary review of the fauna so far. The oldest significant paper, SELYS (1887), identifies Beirut as the type locality of a few species/subspecies. Later contributions that at least partially deal with Lebanon include BOLIVAR (1893), MARTIN (1909), GADEAU DE KERVILLE (1926), MORTON (1924), SCHMIDT (1938, 1954), ST QUENTIN (1965), SCHNEIDER (1986), SCHNEIDER & MOUBAYED (1987), and DUMONT (1977, 1991). Here, we present the result of thirty years of observations (1979 to the present) on the aquatic environments of Lebanon (DIA 1998), with special emphasis on the Odonata. Imagines were collected using entomological hand nets. In all, 77 stations were surveyed, scattered all