



REMARKS ON *LEUCOCYTOZOON* (APICOMPLEXA, LEUCOCYTOZOIDAE) OF CORVIDAE FROM NORTHERN ITALY

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Four species of the genus *Leucocytozoon* have been described as blood parasites of Corvidae in Europe: *L. sakharoffi* (Sambon 1908) in *Corvus corax*, *L. berestneffi* (Sambon 1908) in *Pica pica*, *L. laverani* (França 1912) in *Garrulus glandarius* and *L. zuccarellii* (Léger 1913) in *Corvus corone*. The similarity of their gametocytes makes it difficult to identify them by size and appearance. Coatney and Roudabush (1937) considered *L. zuccarellii* a synonym for *L. sakharoffi* and Fallis (1950) regarded *L. berestneffi* as a synonym for *L. sakharoffi*. But the knowledge of their schizogonic and sporogonic development (Clark 1965, Baker 1971, Khan and Fallis 1971), suggests specific differences, and in the recent check-lists (Hsu *et al.* 1973, Peirce 1981), three species of *Leucocytozoon* parasites of Corvidae were considered.

During April and May 1982 and 1983 104 nestling or adult Hooded Crows (*Corvus corone cornix*), 1 Magpie (*Pica pica*), and 1 Rook (*Corvus frugilegus*), were sampled in various localities of the province of Pavia (Northern Italy). Blood and impression smears of organs (heart, liver, spleen, and kidney) were air-dried, fixed with methanol and stained by the Giemsa method. Each slide was examined for the presence of parasites using a Leitz Orthoplan microscope.

Twenty-one Hooded Crows (20.19%) were infected with *L. sakharoffi* (Fig. 1, Tab. I). This is the first record for Italy of the parasite. One Magpie was infected by *L. berestneffi*. One Rook was infected by microfilaria.

TABLE I Dimensions of the gametocytes of *Leucocytozoon sakharoffi* from *Corvus corone cornix*, and of the erythrocytes of the birds. Averages in μ and standard deviations in parenthesis, were obtained from 10 gametocytes and 10 non-infected erythrocytes.

	length		width		area	
macrogametocyte	11.5	(10)	11.6	(0.8)	104.7	(7.0)
host cell nucleus for the macrogametocyte	23.3	(7.1)	1.5	(0.8)	24.2	(4.2)
microgametocyte	9.5	(1.2)	10.1	(1.1)	76.0	(12.3)
host cell nucleus for the microgametocyte	17.1	(6.7)	2.2	(0.7)	24.5	(5.1)
normal erythrocyte	11.8	(0.9)	6.8	(0.3)	63.9	(0.1)
nucleus of normal erythrocyte	5.1	(0.8)	2.4	(1.0)	8.5	(1.0)

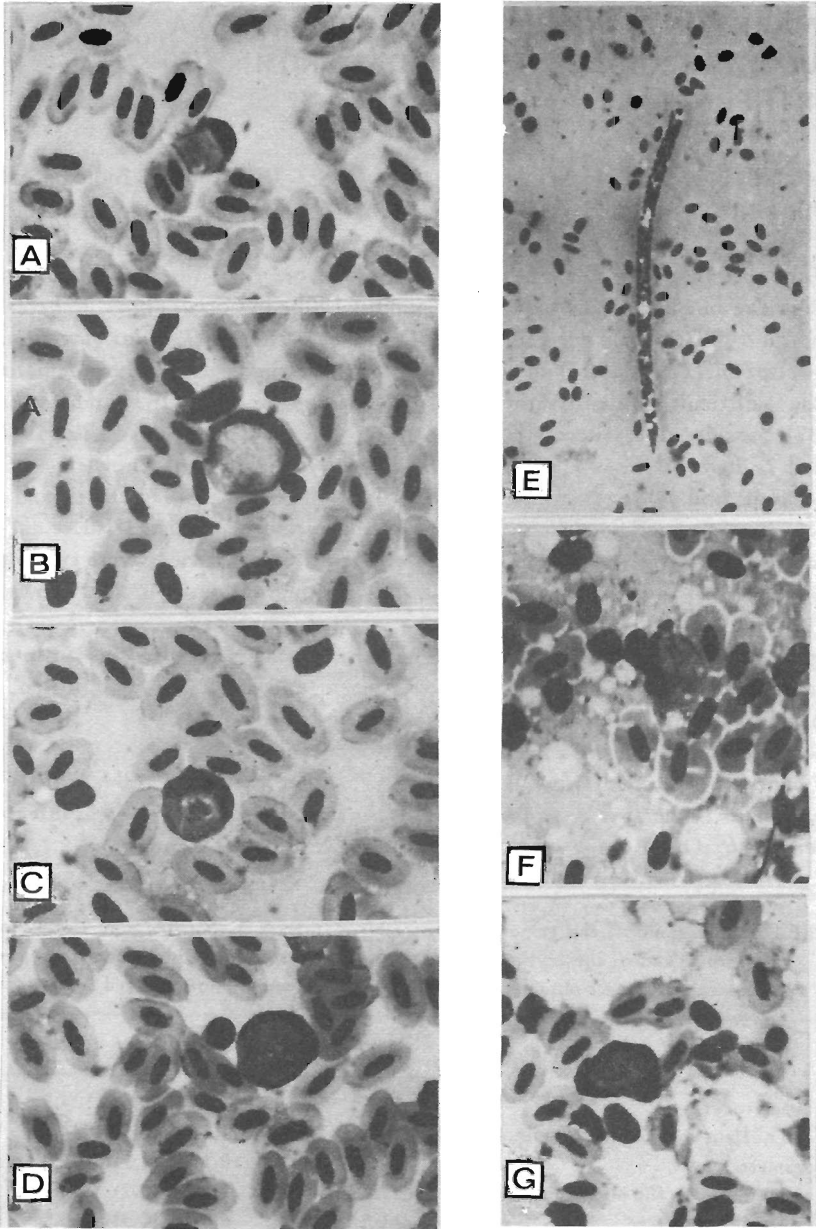


FIGURE 1 -- *Leucocytozoon sakharoffi*: A immature microgametocyte, B mature microgametocyte, C immature macrogametocyte, D mature macrogametocyte, E microfilaria from *Corvus frugilegus*. *Leucocytozoon berestneffi*: F mature microgametocyte, G mature macrogametocyte.

RIASSUNTO

OSSERVAZIONI SU *LEUCOCYTOZOOM* PARASSITI DI CORVIDAE
IN NORD ITALIA

— Nel 1982-1983, sono stati esaminati per la ricerca di parassiti ematici 104 esemplari di Cornacchia grigia, 1 di Gazza e 1 di Corvo. 21 Cornacchie grigie sono risultate infette con *Leucocytozoon sakharoffi*, la Gazza con *L. berestneffi* e il Corvo con microfilaria. Questi ritrovamenti sono i primi segnalati in Italia.

RESUME'

OBSERVATIONS SUR *LEUCOCYTOZOOM* PARASITES DE CORVIDAE
DANS L'ITALIE DU NORD

— Dans le 1982-83, ont été examinés pour la recherche de parasites hématiques 104 exemplaires de Corneille, 1 de Pie et 1 de Corbeau. Vingt-et-un Corneilles grises sont ressorties infectées par *Leucocytozoon sakharoffi*, la Pie par *L. berestneffi* et le Corbeau par microfilaires. Ces réperages sont les premiers signalés en Italie.

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