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Some structural observations on the two species *Przhevalskiana silenus* and *Cochliomyia bezziana* infecting goats in Saudi Arabia

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ABSTRACT:

The Study presented ultrastructure of two species of fly larvae *Przhevalskiana silenus* and *Cochliomyia bezzianacauses* that cause myasis in farm animals in the Kingdom of Saudi Arabia. The study recorded the structure of these two types that showed differences spines distribution and morphological characteristics of mouth-hooks and spiracles that would not be recognized with a light microscope. The study presented that the highest rate of infection myiasis is in the summer months in different age groups and in both sex.

INTRODUCTION:

Myiasis is a disease of vertebrate animals and man. It is caused by parasitic dipterous fly larvae feeding on the host's necrotic or living tissue. It is a serious problem for the livestock industry, causing severe economic losses worldwide (Otranto, 2001). The presence of cases of myiasis in camels and goats of the Kingdome of Saudi Arabia has been documented by several authors. Different infections were described in the abattoirs of Jeddah and Riyadh where larvae were found attached to the nasal and pharyngeal linings where they cause severe irritation may accompany with histopathological changes. Also, in rare cases larvae may reach head cavity and cause neurological symptoms and may lead to death (Hussein, et al 1981).

AIM OF THE STUDY:

The present study aims at identification and description of the species that cause caprine myiasis in the Eastern Region of Saudi Arabia.

MATERIAL AND METHODS:

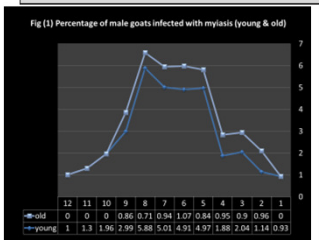
In 2007, random samples of the external parasites were collected from endogenous species of goat Capra hircus in the different farms and abattoirs in the Eastern Region of Saudi Arabia. After collection of samples from the infested animal skin, they were killed in hot water 60 oC. part of the samples was processed according to the method described by Pritchard and Kruse (1982) to prepare permanent stained smears and the other part was processed according to the method described by Keirans et al., (1976) to be examined by the Scanning Electron Microscope (SEM JSM-5800LV-Japan) in the Mechanical Engineering Department of King Fahd University of Petroleum and Minerals in Saudi Arabia. Identification of the collected samples was carried out by using standard keys (Smith, 1973; Bland and Jaques, 1980; Borror et al., 1989; Spradbery, 2002). To confirm our identification some samples were sent to Dr. John Deeming in the Natural History Museum in London.

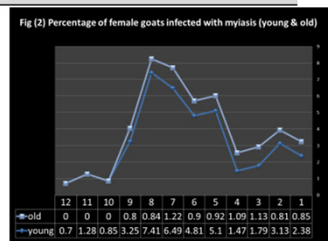
RESULTS:

Table (1) Monthly infection in male and female goats infected with myiasis:

Female						Male						Months
Large (Year - 5 Years)			Small (Month -12 Months)			Large (Year - 5 Years)			Small (Month -12 Months)			
%	Infect	Exam	%	Infect	Exam	%	Infect	Exam	%	Infect	Exam	
0.85	1	118	2.38	1	42	-	-	147	0.93	3	321	Jan
0.81	1	123	3.13	1	32	0.96	1	145	1.14	4	352	Feb
1.13	2	177	1.79	1	56	0.90	2	221	2.04	10	491	Mar
1.09	2	183	1.47	1	68	0.95	2	211	1.88	9	478	April
0.92	2	217	5.10	5	98	0.84	2	237	4.97	36	724	May
0.90	2	221	4.81	5	104	1.07	3	281	4.91	38	774	June
1.22	2	164	6.49	5	77	0.94	2	213	5.01	35	698	July
0.84	1	119	7.41	2	27	0.71	1	141	5.88	21	357	Aug
0.80	2	249	3.25	5	154	0.86	2	233	2.99	39	1304	Sept
-	-	208	0.85	1	117	-	-	217	1.96	15	766	Oct
-	-	168	1.28	1	78	-	-	167	1.3	6	627	Nov
-	-	231	0.70	1	143	-	-	218	1.00	8	793	Dec
0.83	18	2177	2.61	29	996	5.55	15	2431	3.01	224	7430	Total
Large :1.38			Small: 10.45			Females : 1.96			Males : 9.69			Aver

• There Are No Significant Differences Between Young And Old, And Between Males And Females (P <0.05).





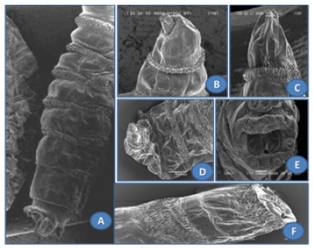


Fig (3) *Cochliomyia bezziana*: (A) body segments with rows of spines; (B,C &D) anterior segments with the head; (E&F) posterior segments with spiracles.

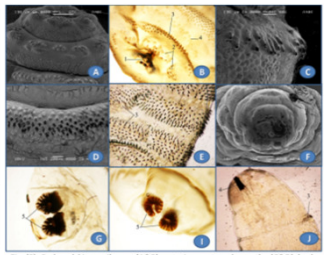


Fig (3) *Przhevalskiana silenus*: (A&B) anterior part and mouth; (C&D) body segment s with spines; (F-J) posterior segments with spiracles.

CONCLUSION:

The present study documented the presence of two species of dipterous fly larvae infesting the endogenous goats in the Eastern Region of Saudi Arabia. The detected species are *P. silenus* and *C. bezziana*. The description of the species is in accordance with previous studies. Infestation with *P. silenus* was found in neck, perineum and butt. In the infested areas the three larval stages L1, L2 and L3 were found. Infestation with *C. bezziana* was found in the lower abdominal area, perineum and butt. In the infested areas only the third larval stage and L3 was found. This is the first identification of *P. silenus* and *C. bezziana* in the Eastern Region of Saudi Arabia.

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