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التوثيق الالكتروني والميكروفيلم

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بالرسالة صفحات لم ترد بالأصل

COMPARATIVE MORPHOLOGICAL STUDIES ON THE FEMALE GENITAL ORGANS OF RUMINANTS IN EGYPT

By

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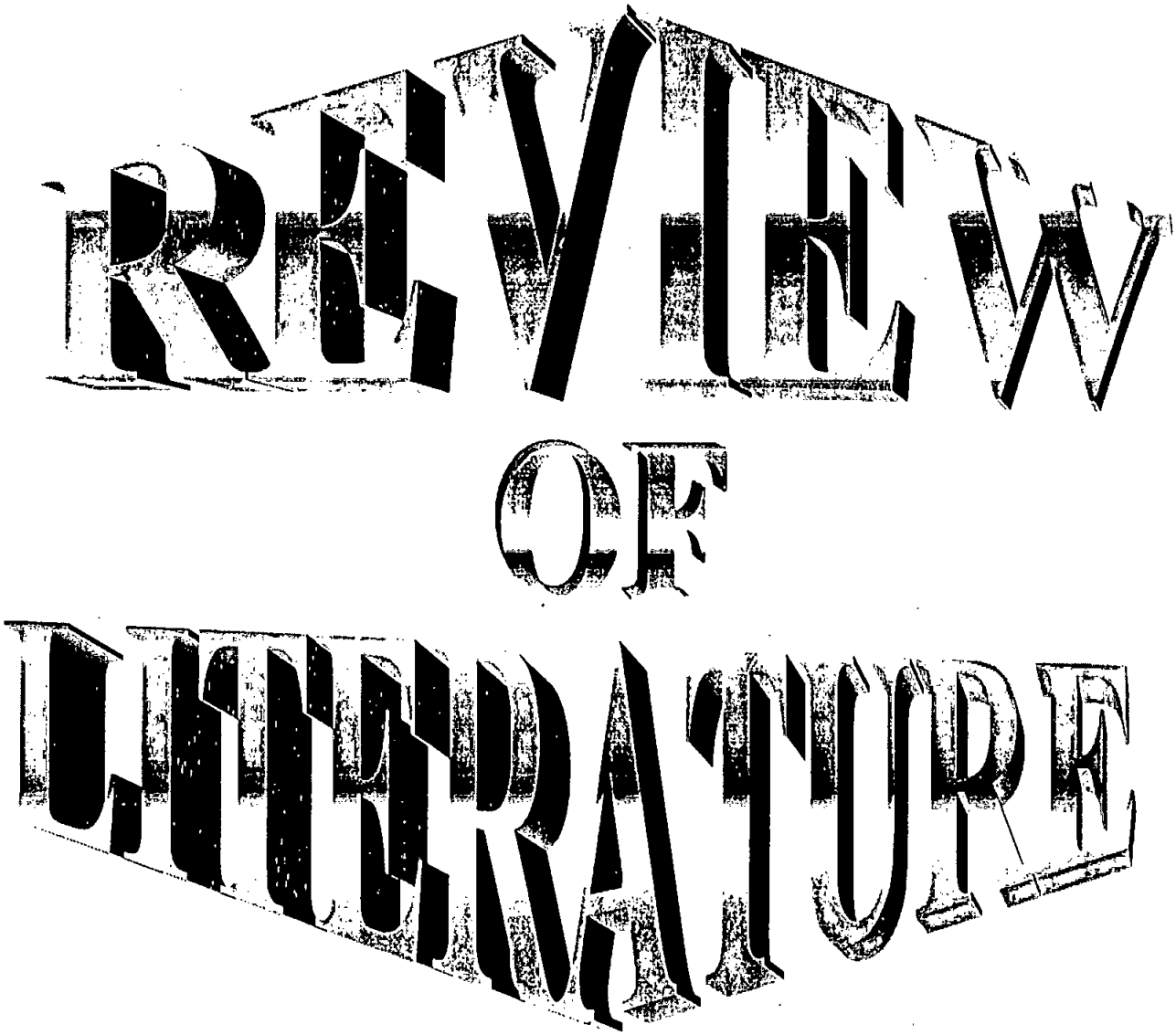
In Egypt, the ruminants play an important role in the national economy. They constitute the only source of milk, main source of meat, leather and other associated biproducts. Therefore the morphological study of the female genital organs in these animals may be helpful to increase their reproductive efficiency and subsequently increase their number.

Although several works have been done concerning the morphology of ruminant's female genital organ. **(El-Hagri, 1967; Nickel, Schummer and Sieferle, 1979 and Hafez, 1993** in ruminants; **Mobarak, 1968 and Ragab, 1979** in the buffalo; **Koujan, 1974 and Habib, 1977** in the ewe; **Kalhoro, Pardelhi, Dhanani, Kalhoro and Rind, 1994** in the goat and **Tayeb, 1945** and **Smuts and Bezuidenhout, 1987** in she–camel). A little of these literatures concerning the comparative morphology of the ruminant's female genitalia together in relation to the follicular and luteal phases have been done. Therefore, the present work aimed to investigate and compare the morphology of the female genital organs (ovary, uterine tube, uterus and vagina) of all Egyptian ruminants (cow, buffalo, ewe, goat and camel).

In an effort to visualize the pattern of their reproduction as well as to distinguish between their female genital organs. This study would be of value for Veterinarian who are concerning with the reproduction of these animals and the management of their gynaecological disorders as well as it fills a gap in the field of comparative anatomy.


REVIEW
OF
LITERATURE

REVIEW OF LITERATURE

I. THE OVARY

The shape of the ovary in both cattle and buffalo varies considerably according to the stage of estrus cycle and the presence of follicles or Corpora-lutea **(El-Hagri and Mahmoud, 1956; Arthur, Noakes and Pearson, 1989 and Mansour, 1996).**

The cow

The normal cyclic ovary varies from bean to oval or ovoid in shape **(Zaki, El-Wishy, Osman, and Afiefy, 1963; Nickel, *et al.*, 1979; Dyce, Sack and Wensing, 1996 and Mansour, 1996),** while **Hafez (1993)** mentioned that the ovary is almond in shape. **Nickel *et al.* (1979)** added that, the ovary had yellowish colouration.

The buffalo

The ovarian shape varies from spherical to ovoid **(Mobarak, 1968; El-Shafey, 1972 and Essawy, 1982). Mobarak (1968)** added that the ovary has a grayish-white colour.

The ewe

Shalash and El-Gindi (1968) and **Omar (1972)** recorded that the ovaries of ewe are spherical in outline and show variations due to the presence of Corpora lutea or follicles.

Habib (1977); May (1977) and Hafez (1993) mentioned that the ovarian shape is irregular or almond. **May (1977)** added that, it is generally pale creamy in colour and both the follicles and Corpora lutea are projected from the surface of the ovary.

The goat

Singh, Bhattacharya and Luktuke (1974) observed that there is a considerable similarity in the size and shape of the ovaries of both goat and ewe. **Nicke *et al.* (1979)** mentioned that the ovaries of the sheep and goat are oval to round and have an uneven surface.

She camel

Tayeb (1945) and Shalash and Nawito (1964) described that the ovary is a somewhat reddish flattened and lobulated organ with circular outline.The lateral and medial surfaces are slightly convex and its ventral free border is more convex and the attached dorsal border is somewhat straight.

Ali (1975) mentioned that the ovarian shape is subjected to much variations in the resting and functioning phases, according to the size, position and forms of the follicles as well as Corpus luteum if present. The ovary is rounded or irregular in outline when it is active.

El-Wishy and Hemeida (1984) recorded that the ovary is somewhat flattened organ with clearly distorted outline. The attached or mesovarial border has a distinct hilus connected with a cord like ovarian ligament, while the free ventral border is irregular. They added that numerous fissures are quite present giving the ovary a lobulated appearance.

Smuts and Bezuidenhout (1987) reported that during estrus phase the ovary becomes irregular in shape due to the presence of ovarian follicles. One of the follicles is usually larger than the rest.

Dimensions of the ovary:

The cow

Author	Year	Animal	Weight (g)	Dimensions (cm)		
				Length	Breath	Thickness
El-Hagri and Mahmoud	1956	Cow	5.9	2.8	1.9	1.7
El-Hariri	1976	Cow	--	2.1-2.96	1.2-2.4	1.4-2.14
Nickel *et al.*	1979	Cow	15-19	4	2	1–2
Dyce *et al.*	1996	Cow	--	4	2.5	1.5

Mansour (1996) recorded that the mean ovarian dimensions (Length, breadth and thickness) and weight are 3.06, 2.26, 1.85 cm and 5.65 g during the follicular phase and 3.27, 2.77, 2.06 cm and 5.99 g during the luteal phase respectively.

The buffalo

Luktuke and Rao (1962) and Mobarak (1968) mentioned that the average dimensions (length, breadth and thickness) and weight of the ovaries are 2.9, 1.4, 1.6 cm and 3.8 g, respectively.

Farrag (1978) and Mansour (1996) stated that the mean ovarian dimensions (length, breadth and thickness) and weight are 2.25× 1.69 and 1.48 cm and 3.62 g, during the follicular phase and 2.63, 1.78 and 1.56 cm and 3.97 g, during the luteal phase, respectively.

Small ruminants:

The ewe

Kammlade (1947) mentioned that the dimensions of the ovary are 2.5, 1.0, 1.0 cm.