ABSTRACT
During the present study ten species of *Eimeria* from sheep and twelve species of *Eimeria* from goats were found. It was seen that five species of *Eimeria* were common to both hosts, while seven species occurred only in goats and five species only in sheep. The relative prevalence of the sheep and goats are analysed.

KEY WORDS: Eimeria, coccidiosis, oocyst, Sporozoite.

INTRODUCTION
Coccidian parasites of the genus *Eimeria* (Coccidia: Eimeriidae) are highly susceptible organisms which inhabit and multiplies in the intestinal tract. These parasites cause coccidiosis. In coccidiosis is caused by the genus *Eimeria*. Within this genus, there are more than ten species of coccidia that are known to infect sheep and goats. Not all of the species are pathogenic or have the same level of pathogenicity. In fact, only few are usually responsible for disease outbreaks.

MATERIALS AND METHODS
The material for the study of coccidia of goats was obtained from various slaughter houses as well as from different fields in and around Beed (M.S). Different parts of the intestine of slaughtered goats were examined and processed within 4-5 hours after collection.

The faecal contents were diluted with distilled water and sieved to remove the large faecal debris. After repeated washing the oocysts were concentrated by centrifugation at 3000 rpm for 10 minutes. The oocysts were then spread out in shallow Petri dishes and covered with 2.5% solution of potassium dichromate for sporulation.

OBSERVATION AND RESULTS
During the present study twelve species of *Eimeria* are found in goats. Nine species are redescribed and three are new species. The commonest was *E. arloingi*, it was found in 80 of 528 positive samples, showing a prevalence of 15.15% of the positive samples or 3.03% of the total sample examined.

*E. intricata* was the fifth found in 55 out of 528 positive samples, representing 10.41% of the positive samples 2.08% of the total samples.

During the study ten species of *Eimeria* are found in sheep, eight species are redescribed and two are new species. *Eimeria crandallis* was the most frequent, being found in 108 out of 594 positive samples (18.18%) or 4.38% of the total samples.

*Eimeria intricata* was the fifth found in 61out of 594 positive samples, representing 10.26% of the positive samples and 2.47% of the total samples examined.

Description of the oocyst of *Eimeria intricata* in goat
The oocysts collected from the goats are ellipsoid or elongate ovoid and large in size. The wall of the oocyst is typically thick, double layered, brownish and rough. The outer layer is 2.0µm thick, but it is thin in the micropylar region. A micropyyle and micropylar cap are present. There are transverse stripations on the wall. The inner layer is thin 1.2µm, smooth and almost transparent. The micropylar cap is typically flattened and measures 7 to 14µm in width and 2 to 8µm in height. Polar granules and oocystic residuum are absent. The diameter of spherical sporoblast in the unsporulated oocyst measures about 24 to 32µm in diameter.

The four elongated, ovoid, with one end pointed and other rounded sporocyst are observed. The pointed end of the sporocyst has small conspicuous button like stieda body. The sporozoites are fusiform and lie head to tail in position. Each sporozoite has two refractile globules. The sporocystic residuum is granular and scattered in the middle region of the sporocyst.
Description of the oocyst of *Eimeria intricata* in sheep

The oocysts of the species collected from the sheep are thick, brownish double layered and rough. The outer layer is 2.8\(\mu\)m thick brown in colour and thin in the micropylar region. The inner layer is 2.0\(\mu\)m, smooth and transparent. Striations on the oocyst wall seen here also. The micropylar cap is flattened and measures 8 to 18\(\mu\)m in width and 4 to 12\(\mu\)m in height. Polar granule and oocystic residuum are absent.

Oocysts found in goat and sheep are similar in shape only they are slightly different in their sizes. Oocysts found in sheep are slightly larger than that of goat (shown in table) sporocysts in sheep are also larger than goat.

The dimensions of the sporulated oocysts of *Eimeria intricata* from goats and sheep are as follows:

(All measurements are in microns)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Oocyst from goat</th>
<th>Oocyst from sheep</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of the oocyst</td>
<td>37.0 – 55.0 (46.34)</td>
<td>40.0 – 65.2 (48.54)</td>
</tr>
<tr>
<td>Width of the oocyst</td>
<td>32.0 – 42.0 (36.98)</td>
<td>29.0 – 57.0 (42.09)</td>
</tr>
<tr>
<td>Length width ratio of the oocyst</td>
<td>1.1 – 1.3 (1.2)</td>
<td>1.1 – 1.3 (1.1)</td>
</tr>
<tr>
<td>Length of the sporocyst</td>
<td>11.0 – 21.2 (16.34)</td>
<td>14.1 – 23.4 (19.66)</td>
</tr>
<tr>
<td>Width of the sporocyst</td>
<td>8.2 – 16.3 (12.36)</td>
<td>10.4 – 19.7 (14.21)</td>
</tr>
<tr>
<td>Length width ratio of the sporocyst</td>
<td>1.3 – 1.3 (1.3)</td>
<td>1.3 – 1.3 (1.3)</td>
</tr>
</tbody>
</table>

The frequency distribution of the lengths and widths of the oocysts of *Eimeria intricata* from goats and sheep shown in Graph No.1

Sporulation time:
The sporulation time of the oocyst is found to be 72 to 84 hours for both the hosts.

Prevalence:
The species was found in 2.08\% of the 2636 goats and 2.47\% of the 2462 sheep examined from Beed district.

Fig.1. Unsporulated oocyst of *Eimeria intricata* From Goat.  
Fig.2. Unsporulated oocyst of *Eimeria intricata* From Sheep.
Fig. 1. Sporulated oocyst of *Eimeria intricata* from Goat.

Fig. 2. Sporulated oocyst of *Eimeria intricata* from Sheep.

Graph 1. Showing the frequency distribution of the lengths and widths of oocysts of *Eimeria intricata* from goats and sheep.
Table No. 1. Showing the comparative dimensions of oocysts of *Eimeria intricata* from goats and sheep (Based on various authors)

<table>
<thead>
<tr>
<th>Author</th>
<th>Length of the oocyst</th>
<th>Width of the oocyst</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christensen (1938)</td>
<td>39.0 – 54.0</td>
<td>27.0 – 36.0</td>
<td>47 x 32</td>
</tr>
<tr>
<td>Shah (1963)</td>
<td>47.0 – 59.0</td>
<td>34.0 – 47.0</td>
<td>51 x 39</td>
</tr>
<tr>
<td>Singh (1963)</td>
<td>43.0 – 55.0</td>
<td>30.0 – 46.0</td>
<td>49.8 x 38.9</td>
</tr>
<tr>
<td>Restani (1966)</td>
<td>46.0 – 54.0</td>
<td>31.0 – 39.0</td>
<td>50 x 35.5</td>
</tr>
<tr>
<td>Bhatia and Pande (1970)</td>
<td>37.0 – 54.0</td>
<td>29.0 – 41.0</td>
<td>46.5 x 35.5</td>
</tr>
<tr>
<td>Bawazir (1980)</td>
<td>37.7 – 61.2</td>
<td>27.5 – 49.0</td>
<td>49.1 x 35.1</td>
</tr>
<tr>
<td>Nikam (1983) in goat</td>
<td>36.0 – 50.0</td>
<td>25.0 – 41.0</td>
<td>41.5 x 29</td>
</tr>
<tr>
<td></td>
<td>34.0 – 55.0</td>
<td>24.0 – 42.0</td>
<td>43.35 x 32.57</td>
</tr>
<tr>
<td>Nikam (1983) in sheep</td>
<td>36.0 – 50.0</td>
<td>25.0 – 41.0</td>
<td>41.5 x 29</td>
</tr>
<tr>
<td></td>
<td>34.0 – 55.0</td>
<td>24.0 – 42.0</td>
<td>43.35 x 32.57</td>
</tr>
<tr>
<td>JadHAV (2002)</td>
<td>35.0 – 47.0</td>
<td>24.0 – 37.0</td>
<td>40.0 x 29.96</td>
</tr>
<tr>
<td>Present author in goat</td>
<td>37.0 – 55.0</td>
<td>032.0 – 42.0</td>
<td>46.34 x36.98</td>
</tr>
<tr>
<td></td>
<td>40.0 – 65.2</td>
<td>29.0 – 57.0</td>
<td>48.54 x42.09</td>
</tr>
<tr>
<td>Present author in sheep</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**Comments**


Comparison of the oocysts from goats and sheep of present author with the previous workers is given in Table No.1 After the observation of the dimensions of the various workers it has seen that the oocysts in goats are approximately similiar in size, only in case of sheep they are slightly larger in size.

**ACKNOWLEDGEMENT**

The Authors are grateful to the head Dept. of Zoology Dr. B.A.M.University, Aurangabad (M.S.) for providing the library and laboratory facilities.

**REFERENCES**


