



V.	A COMPARATIVE STUDY OF THE OXYGEN-CARRYING CAPACITY OF THE BLOOD OF WATER- AND AIR-BREATHING TELEOSTS	142
	The technique employed, <u>143</u> ; Result, <u>146</u> ; Discussion, <u>147</u> ; Conclusion, <u>150</u> .	
VI.	THE ADAPTATIONAL FEATURES IN THE GILLS OF THE AIR-BREATHING TELEOSTS	151
	Results, <u>154</u> ; Discussion, <u>154</u> ; Conclusion, <u>155</u> .	
VII.	THE EXTENT OF GILL-SURFACE AVAILABLE FOR GASEOUS EXCHANGE IN CERTAIN INDIAN TELEOSTS	156
	Method of study, <u>159</u> ; The names of the fishes examined, arranged according to the classification adopted by Day, <u>160</u> ; Result, <u>165</u> ; Discussion, <u>167</u> ; Conclusion, <u>168</u> .	
VIII.	OXYGEN-CONSUMING CAPACITY OF THE GILL-TISSUE OF CERTAIN INDIAN TELEOSTS	169
	The technique employed, <u>170</u> ; Result, <u>173</u> ; Discussion, <u>175</u> ; Conclusion, <u>175</u> .	
IX.	DISCUSSION ... ..	176
	1. The adaptational features of the air-breathing teleosts, <u>177</u> ; A. The oxygen-leading tension of the blood, <u>177</u> ; B. Lining of the respiratory epithelium by a mucous aqueous layer, <u>179</u> ; C. The extent of gill-surface, <u>181</u> ; D. The disposition of the muscles associated with respiration, <u>183</u> ; E. Oxygen-consuming capacity of the gill-tissue, <u>183</u> ; 2. Deficiency of oxygen in the medium as a causative stimulus for the origin of the air-breathing organs, <u>184</u> ; 3. The origin and evolution of the air-breathing habit and the evolutionary trends in fishes viewed against the larger setting of vertebrate evolution, <u>189</u> .	
X.	SUMMARY AND CONCLUSIONS ... ..	197
XI.	BIBLIOGRAPHY ... ..	201

APPENDIX ... .. i

Tabulated statements showing in detail the gill-  
surface per unit volume calculated in different  
fishes examined.

AUTHOR INDEX ... .. Lii