

PREFACE

"A bird in hand is better than two in the bush" is an old saying. Perhaps we ought to change it, as it is better to have the birds in the bush than in the hand. No other group of living animals has an existence as remarkable and colourful as that of birds. Their aerial life and the close association with trees have given them comparative safety from the ground dwelling enemies and have also permitted them to diverge and adapt to all types of niches. Most of the morphological and some of the physiological adaptations of aves have no parallelism in other groups of animals. This has evoked natural curiosity in the mind of man to know and understand their unique way of life. The birds have also attracted man's inquisitiveness because of their aesthetic, gustatory and economic importance and values. Hence, while, naturalists and ornithologists may prefer to leave the birds in the bush, we still have to have them in hand until we know everything about them.

Domestic pigeon is a handy tool in the investigation of avian physiology, as this bird, being an active flier is a better representative of avian species than domestic fowl. In the city of Baroda, the population of pigeons has increased out of proportion and they have become a pest and a nuisance.

The studies on post-hatching development of liver of pigeon were aimed at understanding the controlling mechanism that synchronizes growth and the time of attainment of functional maturity of the liver with other factors such as food and nestling period. The metabolic functions of the liver were only given importance in the studies as these functions have direct bearing on food.

A few preliminary studies were also carried out on the adult pigeon liver, especially on the role of liver in the carbohydrate metabolism, and its regulation by hormones. These studies have opened up new vistas for future research. Some studies are being tackled at present in our laboratory on these lines.

The chapters presented in the thesis are prepared as independent entities for clarity of explanation and hence some amount of repetitions have inevitably crept in. Since, each chapter also has a separate 'introduction' the general introductory chapter is designed to unfurl the development of thought and to befriend the theme.

An overall conclusion, drawn from the investigations carried out, is presented in chapter 11. Since the studies could at best be considered as spade work, the conclusions are mingled with hypotheses and extrapolations.