The ovoid bodies in the posterior portion of the perisarcal sheath are formed by successive constrictions of the foot. These develop into young hydroids directly or after one or more transverse fissions.

Because of the arrangement of the tentacles, the position of development of the medusae, the solitary nature of this hydroid and the single tentacle of the medusae it evidently belongs in the family, *Corymorphidae*. The generic name *Dahlgrenella*, nov. gen., is chosen to express my gratitude to Professor Ulric Dahlgren for his kind assistance and for the method of collecting mud-living hydroids devised by him. The specific name, *farcta*, nov. sp., is proposed as descriptive of the perisarc with its ovoid reproductive bodies, being from the Latin verb "to stuff" from which the Latin "farcimen" for sausage is derived.

A STUDY OF THE ACTION OF CERTAIN DRUGS ON THE CIRCULATION OF THE DOGFISH

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Ergotamine (as Gynergen, Sandoz) neither reversed nor diminished the augmentor effect of adrenalin on the blood-pressure measured in the ventral aorta of the dogish, *Squalus acanthias*.

Previous injections of cocain did not sensitize to adrenalin nor desensitize to ephedrin.

Posterior pituitary extract (as Pituitrin, P. D. & Co.), and oxytocin (as Pitocin, P. D. & Co.) and vasopressin (as Pitressin, P. D. & Co.) all exerted an augmentor effect on the blood-pressure in the ventral aorta. No depressor effect was exerted by subsequent injections. The effects on the heart rate were variable, usually no significant change resulting.

Chlorazol-fast-pink, an azodye, which, in dosage of 80 to 100 mg. per kilo, has been successfully used in rabbits, cats and dogs as an anticoagulant in vivo, exerts, in much smaller dosage (20 to 30 mg. per kilo), so depressing an action on the circulation of the dogfish, that its use as an agent to prevent clotting in the arterial cannulae had to be abandoned.

TISSUE CULTURE STUDIES ON DOGFISH PITUITARY

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Following the work of M. R. and W. H. Lewis in 1935, the hypophysis of *Squalus acanthias* was again grown successfully in tissue culture. Various media were employed, the type of growth was

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studied and an attempt to improve most culture methods was made. The hypophysis was divided at the time of culturing into its various morphological parts, i.e. pars distalis, pars medialis, pars intermedia, pars nervosa, pars vasculosis, pars ventralis, and separate cultures made from each. Considerable success was had in growing the pars distalis and pars medialis in hanging drop cultures with a medium consisting of one half dogfish serum and one half heparinized chicken plasma to which NaCl was added to give a concentration of 1.8%. Several cultures of the intermedia were also successful with this medium not only pars distalis and pars medialis appeared to proliferate in any of the media employed. Of the latter there were pure dogfish serum, dogfish serum and plasma mixtures and dilutions of all the media with saline. Neutral red was also introduced in some media for vital staining and appeared to have no harmful effects in low concentrations. Poor results were obtained with media lacking chicken plasma but the latter was shown to be chemically unessential. Media containing it in sufficient quantity to form a firm clot were the best, though even chicken plasma tended to be liquified by the tissue, particularly by the intermedia and this may have accounted for the poor results with the latter. The majority of the cultures were in hanging or lying drops. Unsuccessful attempts were made however to grow tissue in a chamber through which medium was flowing continuously, hoping that tissue could be grown for longer periods of time without transfer.

An attempt was also made to study the histology of the dogfish pituitary and to develop a histological technique for its examination. Ten percent formalin in one and five-tenths percent sodium chloride solution was found to be a satisfactory fixative and pieces of gland were placed in this for about 72 hours after which they were washed for an hour in tap water and infiltrated in the usual manner or put in successive changes of Dioxon and infiltrated directly. Mallory's tricolor stain was used and gave very unexpected results. The Orange G predominated while the fuchsin was not present and the aniline blue very weak. Mallory found this stain to give very beautiful differentiation with human hypophysis showing up eosinophylic and basophilic granules as well as differentiating certain non-granular cells. Even by varying the concentration of the constituents of the stain it was impossible to get the same picture with dogfish hypophysis and basophilic granules were not demonstrated at all. The general dissimilarity of these staining reactions and the tendency of the rat hypophysis to stain strongly in the opposite direction led M. R. Lewis to suggest that the rôle of the hypophysis in the dogfish is much more primitive than in the mammal and that the analogy between similarly named parts of the gland in the two classes may be incorrect. Staining reactions may be the proper tool for correcting these analogies.