Triturating agents are not known to be required for digestion in birds that feed primarily on cephalopods and fish. Why then do these marine birds pick up and swallow indigestible materials? We suggest that, since pelagic birds gather their food on or near the surface of the sea, floating plastic and pumice are taken fortuitously.

We thank Sherwin Carlquist for identifying plant remains, Clifford H. Fiscus for identifying squid remains, and Douglas Keran, Ernest Kosaka, and John Sincock for assisting in counting young albatrosses.

Literature Cited

Bartsch, P. 1922. A visit to Midway Island. Auk, 39: 481–488.

Bierman, W. H., and K. H. Voous. 1950. Birds observed and collected during the whaling expeditions of the "William Barendz" in the Antarctic, 1946–47 and 1947–48. Ardea, 37: 19.

Fisher, W. K. 1903. Birds of Laysan and the Leeward Islands, Hawaiian group. Bull. U.S. Fish Commission, 23: 767–807.

Gill, F. B. 1967. Observations on the pelagic distribution of seabirds in the western Indian Ocean. Proc. U.S. Natl. Mus. 123: 1–33.

Kenyon, K. W. 1950. Distribution of albatrosses in the North Pacific and adjacent waters. Condor, 52: 97–103.

Rice, D. W., and K. W. Kenyon. 1962. Breeding distribution, history, and populations of North Pacific albatrosses. Auk, 79: 365–386.

Simpson, K. G. 1965. The dispersal of regurgitated pumice gizzard-stones by the Southern Skua at Macquarie Island. Emu, 65: 119–124.

Sutherland, F. L. 1964. Pumice from Tasmania. Australian J. Sci., 26: 397.

Karl W. Kenyon, *Bureau of Sport Fisheries and Wildlife, Sand Point Naval Air Station, Seattle, Washington 98115, and* Eugene Kridler, *Bureau of Sport Fisheries and Wildlife, P. O. Box 157, Kailua, Hawaii 96734.*

Arteries in the heart region of the Greater Shearwater—In his study of arteries in the neck and thorax region, Glenny (Proc. U. S. Natl. Mus., 104: 556, 1955) reports members of the order Procellariiformes to be typically bicarotid. He dissected four species of *Puffinus* (*P. griseus*, *P. nativitatis*, *P. opisthomelas*, and *P. lherminieri subalaris*) but included no specimens of *P. gravis*. Nor, aside from a few notes on ligamentous vestiges and types of sternoclavicular (coracoid) and thoracic arteries, does he describe or illustrate the smaller arteries in the heart region. The following observations are based on a single injected specimen collected off Gannet Rock, New Brunswick, Canada. The arterial nomenclature follows Bhaduri, Biswas, and Das (Anat. Anz., 104: 1, 1957).

As shown in Figure 1, the right systemic arch alone remains as the functional aortic arch. Vestiges of both the ligamentum aortae and ligamentum botalli persist. The aortic arch first sends the systemic arch and then gives rise to the innominate arteries which proceed anteriorly and laterad to the left and right before dividing to form the common carotid and subclavian arteries. Arising from the subclavian are the following major vessels: the sternoclavicular, axillary, internal thoracic, and pectoral trunk. An accessory sternoclavicular artery originates from the base of the sternoclavicular artery. The latter vessel also yields a sternotracheal branch to *M. sternotrachealis*. A minute artery supplying the pericardium comes off the accessory

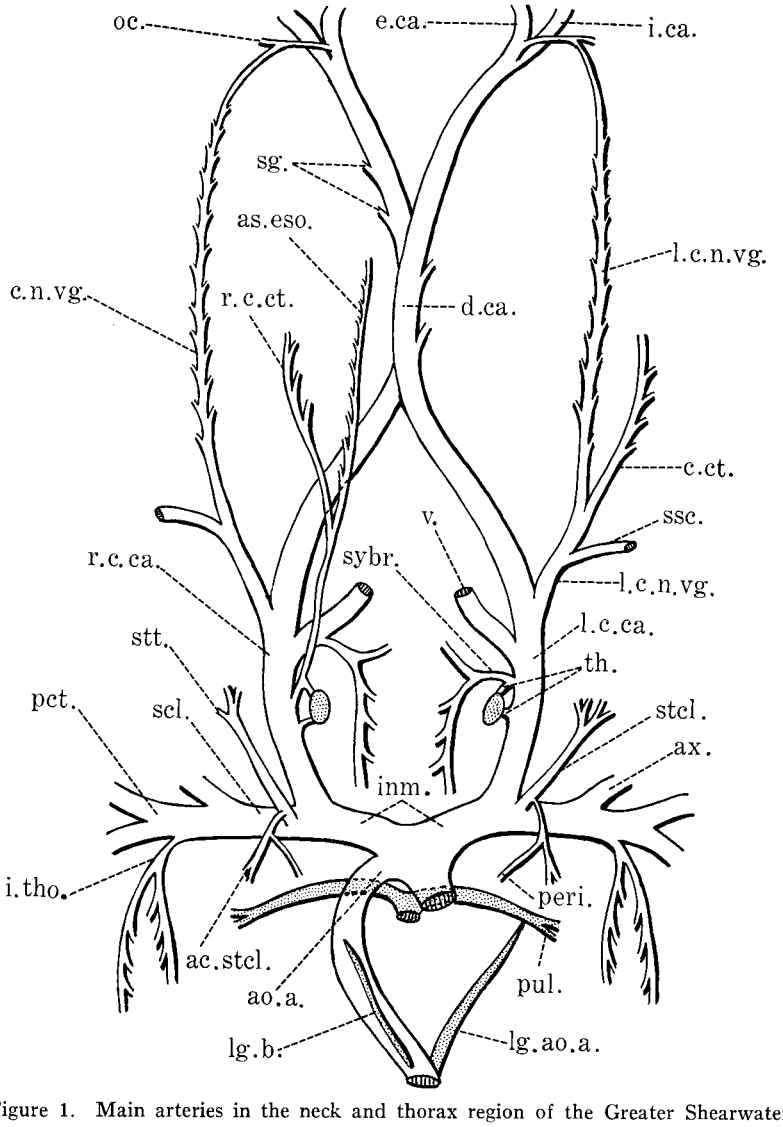

Figure 1. Main arteries in the neck and thorax region of the Greater Shearwater. Ventral view. Key: ac.stcl., accessory sternoclavicular; ao.a., aortic arch; as.eso., ascending esophageal; ax., axillary; c.ct., cervical cutaneous; c.n.vg., comes nervi vagi; d.ca., dorsal carotid; e.ca., external carotid; i.ca., internal carotid; i.tho., internal thoracic; inm., innominate; l.c.ca., left common carotid; l.c.n.vg., left comes nervi vagi; lg.ao.a., ligamentous vestige of the left systemic arch; lg.b., ligamentum botalli; oc., occipital; pct., pectoral; peri., pericardial; pul., pulmonary; r.c.ca., right common carotid; r.c.ct., right cervical cutaneous; scl., subclavian; sg., segmental; ssc., subscapular; stcl., sternoclavicular; stt., sternotracheal; sybr., syringeobronchial; th., thyroid; v., vertebral.

sternoclavicular. The pectoral trunk divides into two vessels which send branches to *M. pectoralis thoraica*, *M. supracoracoideus*, and other nearby muscles.

The left common carotid forms the thyroid, syringeobronchial, vertebral, and comes nervi vagi artery. Twigs to the esophagus, trachea, syrinx, and bronchus arise from the syringeobronchial artery, while the vertebral enters the vertebrarterial canal and proceeds anteriorly to the head. After releasing a subscapular artery and a cervical cutaneous artery to the skin, the left comes nervi vagi runs forward to join the occipital artery at the base of the skull.

The right common carotid differs in having a prominent ascending esophageal artery from which arises the right cervical cutaneous artery. On the right side, the syringeobronchial artery arises from the vertebral artery instead of the common carotid. The origin of the thyroid arteries varies somewhat on each side; they arise from the syringeobronchial, common carotid, or ascending esophageal. Both common carotids continue towards the head as the dorsal carotid arteries which, in turn, divide into internal and external branches at the base of the skull. A series of segmental twigs arise from the dorsal carotids; these small vessels supply blood to the cervical axial structures.

The arrangement of the arteries in the heart region of the Greater Shearwater resembles that of penguins more than that of other orders that have been studied (Glenny, Ohio J. Sci., 44: 28, 1944; 47: 84, 1947). The main differences between the two groups are in the origins of the accessory sternoclavicular, syringeobronchial, thyroid, and esophageal arteries and may perhaps be merely individual variations. The significance of the similar arterial patterns in the two orders cannot be determined without comparative studies of large series of birds from each group.

I wish to thank George A. Clark, Jr., and Fred H. Glenny for helpful advice during the preparation of this paper. This study was supported, in part, by a grant from the Frank M. Chapman Memorial Fund of the American Museum of Natural History—Robert E. Gobeil, *Biological Sciences Group, University of Connecticut, Storrs, Connecticut, 06268. Present address: Department of Biology, St. Francis College, Biddeford, Maine, 04005.*

First record of Smith's Longspur in Connecticut.—On 24 March 1968 I collected a specimen of *Calcarius pictus* at the town dump in Stratford, Fairfield County, Connecticut. The specimen was compared with the series of *Calcarius* at the American Museum of Natural History in New York and is now in the University of Connecticut collection. The bird was a female (ovary 4 × 2 mm) in heavy body molt and moderately fat. From the smooth texture of the ovary I judge that the bird was less than 1 year old. The specimen represents the first record for Connecticut, and is apparently the first collected in eastern North America north of South Carolina and east of Ohio.

I am uncertain if this bird was associated with a flock of about 30 Lapland Longspurs (*Calcarius lapponicus*) present at the time. This locality of approximately 2 acres of open grassland near Long Island Sound is frequented regularly from November to March by Horned Larks (*Eremophila alpestris*), Pipits (*Anthus spinoleta*), Ipswich Sparrows (*Passerculus princeps*), Savannah Sparrows (*Passerculus sandwichensis*), and Lapland Longspurs.—Walter Bulmer, *Biological Sciences Group, University of Connecticut, Storrs, Connecticut 06268.*