HB

60

<TARGET><BILL>HB 60</BILL><SUBJECT>HB
60</SUBJECT><COMM>HRES27</COMM></TARGET>

Alaska State Legislature

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Juneau, AK 99802
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REPRESENTATIVE Paul Seaton

District 35

MEMORANDUM

TO: Representative Feige
Co-Chair, House Resources Committee
Representative Paul Seaton
Co-Chair, House Resources Committee

FROM: Representative Paul Seaton

DATE: February 16, 2011

RE: Request for a hearing, HB 60

I respectfully request a hearing of HB 60 before the House Fisheries Committee

In summary, HB 60 states that the Department of Fish and Game cannot use the absence of wild geoducks in an area to deny a farming permit.

Attached please find: HB 60, DNR fiscal note, F&G fiscal note, sponsor statement, Interesting Geoduck Facts, Article 2 Aquatic Farming, Letter from Alutiiq Pride Shellfish Hatchery, Home page for three minute trailer for "3 feet under – Digging Deep for the Geoduck"

In order to show the brief three minute clip "3 Feet Under – Digging Deep for the Geoduck" I will need a computer and projector.

All teleconference sites are welcome; however there are no special requests. At the committee's discretion, Jeff Hettrick, the manager of the Alutiiq Pride Shellfish Hatchery will need to call in off net.

Staff contact: Katie Koester, 465-2028

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number: 2
Bill Version: HB 60
(H) Publish Date: 2/16/11

Identifier (file name) HB060-DNR-CP&L-02-14-11
Title: Geoduck Aquatic Farming/Seed Transfer
Sponsor: Rep. Seaton
Requester: House FSH

Dept. Affected: Natural Resources
Appropriation: Resource Development
Allocation: Claims, Permits and Leases
OMB Component Number: 2460

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CHANGE IN REVENUES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Temporary	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version

Prepared by: Wyn Menefee, Acting Director — Phone: 269-8501
Division: Mining, Land & Water — Date/Time: 2/14/11 1:00 PM
Approved by: Daniel S. Sullivan — Date: 2/14/2011
Department of Natural Resources

(Revised 1/27/2011 OMB)

FISCAL NOTE #2

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB 60

Analysis

HB 60 would allow for the transfer of geoduck seed from a certified hatchery to an aquatic farm.

This bill would have no impact on the Department of Natural Resources' ability to offer aquatic farming and hatchery lease sites under AS 38.05.083. While this bill might open more areas of the state to the aquatic farming of geoducks, which could result in a slight increase in overall aquatic farmsite leasees, the fiscal impact to DNR is anticipated to be minimal and could be addressed with existing staff and resources.

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

Fiscal Note Number
Bill Version **HB 60**
() Publish Date

Identifier (file name) HB060-DFG-CFD-02-10-11
Title Geoduck Aquatic Farming/Seed Transfer
Sponsor Representative Seaton, Gruenberg
Requester House Special Committee on Fisheries

Dept. Affected ADF&G
Appropriation Commercial Fisheries
Allocation Headquarters Fisheries Management
OMB Component Number 2171

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2012**	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital Outlay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grants	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other (please identify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2011) cost 0.0

POSITIONS

Full-time	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Part-time	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Temporary	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial version.

Prepared by Geron Bruce, Assistant Director
Division Commercial Fisheries Division
Approved by Kevin Brooks, Administrative Services Director
Department of Fish and Game

Phone 907-465-6151
Date/Time 02/10/11 3:00PM
Date 2/10/2011

(Revised 1/27/2011 OMB)

FISCAL NOTE

STATE OF ALASKA
2011 LEGISLATIVE SESSION

BILL NO. HB60

Analysis

No fiscal impact to the department.

Alaska State Legislature

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REPRESENTATIVE Paul Seaton

District 35

Shellfish farming has the potential to diversify the economic base of coastal communities impacted by the changing dynamics of the fishing industry. HB 60 allows this expansion of this clean water industry by permitting geoducks to be farmed subtidally in the Gulf of Alaska even if wild geoducks are not present. The bill does not exempt farmers from any health, safety, or other transfer provisions relating to hatchery seed.

The Alutiiq Pride Shellfish Hatchery is the only hatchery that supplies mariculture spat and seed in the State. It was initiated by the State to be a self-sustaining operation in association with the private mariculture farms permitted by the State. Their business plan relies on the sale of geoduck seed. However, an informal policy of the Department of Fish and Game prevents geoduck seed from being utilized by farms anywhere outside of southeast Alaska. These restrictions on the sale of geoduck seed cause the sole hatchery for the mariculture industry in Alaska to require continual subsidy by the State. HB 60 will allow the mariculture industry to develop around the Gulf of Alaska, providing a potentially strong market for seed and private sector financing for the operation of the hatchery.

As non-mobile filter feeders eating plankton, farmed geoducks will not prey on any local commercial, sport or personal use fish. There have been no reports of species displacement in the sedimentary habitat by geoduck clams. Farmed geoducks will not interfere with personal recreational boaters as they are cultivated in the sediment below low tide and without the numerous buoys and floating cages used in oyster farms. No infectious disease has been identified in any wild geoduck population or the geoduck farming industries of Washington, British Columbia, or Alaska.

The conflict involving geoducks in southeast Alaska is between the dive fishermen who harvest wild stock and farmers who wish to farm in areas with existing wild stock. HB 60 would circumvent this conflict because there is no wild geoduck stock in the proposed area. This bill will not override any Department of Natural Resources farm site leasing or Department of Fish & Game permit regulation.

HB 60 eliminates unnecessary hindrances to the growth of the maricluture industry in Alaska and provides a potential alternative economic base for coastal communities while adequately considering the health of our marine ecosystem.

Staff Contact, Katie Koester 465-2028

1/27/2011 HB60/A

Article 02. AQUATIC FARMING

Sec. 16.40.100. Aquatic farm and hatchery permits.

(a) A person may not, without a permit from the commissioner, construct or operate

(1) an aquatic farm; or

(2) a hatchery for the purpose of supplying aquatic plants or shellfish to an aquatic farm.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of AS 16.40.100 - 16.40.199 and AS 17.20, to

(1) acquire, purchase, offer to purchase, transfer, possess, sell, and offer to sell stock and aquatic farm products that are used or reared at the hatchery or aquatic farm; and

(2) except as provided in (f) of this section, harvest and, without further cultivation, sell an insignificant population that may be present at the aquatic farm site of a wild stock of a shellfish species intended to be cultured at the site.

(c) The commissioner may attach conditions to a permit issued under this section that are necessary to protect natural fish and wildlife resources.

(d) Notwithstanding other provisions of law, the commissioner may not issue a permit under this section for the farming of, or hatchery operations involving, Atlantic salmon.

(e) Upon the expiration or termination of a permit issued under this section, a person who holds a permit for an aquatic farming site where wild stocks of shellfish indigenous to the site are cultured shall, as a condition of the permit, restore the wild stock of shellfish, as consistent with sustained yield management of the wild stock, to the population level that existed on the site when the permit for the site was initially issued by the commissioner. A permit holder is not required to restore that portion of the wild stock of shellfish that was removed from an aquatic farming site by a common property fishery conducted after the issuance of the permit for the aquatic farming site.

(f) If the wild stock of a shellfish species to be cultured at an aquatic farm site exceeds the amount determined by the department to be an insignificant population and if the commissioner determines in writing that removal from the site of that portion of the stock that exceeds an insignificant population would benefit the public and that removal of the stock by a person other than the permittee would unreasonably interfere with the operation of the aquatic farm, the commissioner may authorize the permittee to remove and sell the excess amount of the wild stock from the site, if the permittee pays reasonable compensation, as defined by the department, to the department for the harvest and sale of the excess wild stock. The department shall deposit the money received under this subsection into the general fund. The legislature may appropriate the money received under this section to the department for shellfish management and enhancement.

Sec. 16.40.105. Criteria for issuance of permits.

The commissioner shall issue permits under AS 16.40.100 on the basis of the following criteria:

(1) the physical and biological characteristics of the proposed farm or hatchery location must be suitable for the farming or the shellfish or aquatic plant proposed;

(2) the proposed farm or hatchery may not require significant alterations in traditional fisheries or other existing uses of fish and wildlife resources;

(3) the proposed farm or hatchery may not significantly affect fisheries, wildlife, or their habitats in an adverse manner;

(4) the proposed farm or hatchery plans and staffing plans must demonstrate technical and operational feasibility; and

(5) the proposed farm site may not include more than an insignificant population of a wild stock, on the site, of a shellfish species intended to be cultured.

Sec. 16.40.110. Permit application, renewal, and transfer.

(a) An applicant for an aquatic farming or hatchery permit required under AS 16.40.100 shall apply on a form prescribed by the commissioner. An application for a permit must include a plan for the development and operation of the aquatic farm or hatchery, which must be approved by the commissioner before the permit is issued.

(b) An application for renewal or transfer of a permit must be accompanied by fees required by the commissioner, a report of the disease history of the farm or hatchery covered by the permit, and evidence that satisfies the commissioner that the applicant has complied with the development plan required under (a) of this section. The commissioner may require a health inspection of the farm or hatchery as a condition of renewal. The department may conduct the inspection or contract with a disease diagnostician to conduct the inspection.

(c) A person to whom a permit is transferred may use the permit only for the purposes for which the permit was authorized to be used by the transferor, and subject to the same conditions and limitations.

Sec. 16.40.120. Aquatic stock acquisition permits.

(a) A person may not acquire aquatic plants or shellfish from wild stock in the state for the purpose of supplying stock to an aquatic farm or hatchery required to have a permit under AS 16.40.100 unless the person holds an acquisition permit from the commissioner.

(b) An acquisition permit authorizes the permit holder to acquire the species and quantities of wild stock in the state specified in the permit for the purposes of supplying stock to

(1) an aquatic farm or hatchery required to have a permit under AS 16.40.100;

(2) the department.

(c) The commissioner shall specify the expiration date of an acquisition permit and may attach conditions to an acquisition permit, including conditions relating to the time, place, and manner of harvest. Size, gear, place, time, licensing, and other limitations applicable to sport, commercial, or subsistence harvest of aquatic plants and shellfish do not apply to a harvest with a permit issued under this section. The commissioner of fish and game shall issue or deny a permit within 30 days after receiving an application.

(d) The commissioner shall deny or restrict a permit under this section upon finding that the proposed harvest will impair sustained yield of the species or will unreasonably disrupt established uses of the resources by commercial, sport, personal use, or subsistence users. The commissioner shall inform the Board of Fisheries of any

action taken on permit applications for species that support commercial fisheries subject to limited entry under AS 16.43 and of any permits denied because of unreasonable disruption of an established use. A denial of the permit by the commissioner must contain the factual basis for the findings.

(e) The Board of Fisheries may adopt regulations for the conservation, maintenance, and management of species for which an acquisition permit is required.

(f) Except as provided in (d) of this section or in a regulation adopted under (e) of this section, the commissioner shall issue a permit if

(1) wild stock is necessary to meet the initial needs of farm or hatchery stock;

(2) there are technological limitations on the propagation of culture stock for the species sought;

(3) wild stock sought is not fully utilized by commercial, sport, personal use, or subsistence fisheries; or

(4) wild stock is needed to maintain the gene pool of a hatchery or aquatic farm.

(g) Aquatic plants and shellfish acquired under a permit issued under this section become the property of the permit holder and are no longer a public or common resource.

Sec. 16.40.130. Importation of aquatic plants or shellfish for stock.
A person may not import into the state an aquatic plant or shellfish for the purpose of supplying stock to an aquatic farm or hatchery unless authorized by a regulation of the Board of Fisheries.

Sec. 16.40.140. Limitation on sale, transfer of stock, and products.

(a) A private hatchery required to have a permit under AS 16.40.100 may sell or transfer stock from the hatchery only to an aquatic farm or other hatchery that has a permit issued under AS 16.40.100, except that shellfish stock may also be sold or offered for sale to an aquatic farm or related hatchery outside of the state.

(b) Stock may not be transferred to or from an aquatic farm or hatchery required to have a permit under AS 16.40.100 without prior notice of the transfer to the commissioner. A notice of transfer shall be submitted at least 45 days before the proposed date of transfer.

(c) A notice of transfer must be accompanied by a report of a health inspection of the stock. The department shall conduct the inspection or contract with a disease diagnostician to conduct the inspection. The cost of inspection shall be borne by the department.

(d) The department may restrict or disapprove a transfer of stock if it finds that the transfer would present a risk of spreading disease.

(e) A person may not sell, transfer, or offer to sell or transfer, or knowingly purchase or receive, an aquatic farm product grown or propagated in the state unless the product was grown or propagated on a farm with a permit issued under AS 16.40.100. The permit must be in effect at the time of the sale, transfer, purchase, receipt, or offer.

Sec. 16.40.150. Disease control and inspection.

(a) The department shall order the quarantine or the destruction and disposal of diseased hatchery stock or of aquatic farm products when necessary to protect wild stock. A holder of a permit issued under AS 16.40.100 shall report to the department an

outbreak or incidence of disease among stock or aquatic farm products of the permit holder within 48 hours after discovering the outbreak or incidence.

(b) A holder of a permit issued under AS 16.40.100 shall allow the department to inspect the permit holder's farm or hatchery during operating hours and upon reasonable notice. The cost of inspection shall be borne by the department.

(c) The department shall develop a disease management and control program for aquatic farms and hatcheries.

(d) The department may enter into an agreement with a state or federal agency or a private, state-certified provider to provide services under (b) and (c) of this section, or inspections under AS 16.40.110(b).

Sec. 16.40.155. Records and reports confidential.
Records required by statute or by a regulation adopted by the department concerning aquatic farm stocks or production, prices, and harvests of aquatic farm products and wild stocks, and annual statistical reports of individual aquatic farms or hatcheries required by statute or by a regulation adopted by the department are confidential and may not be released by the department, except that the department may release the records and reports

(1) to the Department of Revenue and the Department of Natural Resources to assist the departments in carrying out their respective statutory responsibilities;

(2) as necessary to comply with a court order;

(3) provided by an aquatic farm or hatchery permit holder to the permit holder whose activity is the subject of the records or reports;

(4) regarding cumulative annual harvests of wild stocks at individual aquatic farm sites.

Sec. 16.40.160. Regulations.
The commissioner may adopt regulations necessary to implement AS 16.40.100 - 16.40.199.

Sec. 16.40.170. Penalty.
A person who violates a provision of AS 16.40.100 - 16.40.199, a regulation adopted under AS 16.40.100 - 16.40.199, or a term or condition of a permit issued under AS 16.40.100 - 16.40.199, is guilty of a class B misdemeanor.

Sec. 16.40.199. Definitions.
In AS 16.40.100 - 16.40.199

(1) "aquatic farm" means a facility that grows, farms, or cultivates aquatic farm products in captivity or under positive control;

(2) "aquatic farm product" means an aquatic plant or shellfish, or part of an aquatic plant or shellfish, that is propagated, farmed, or cultivated in an aquatic farm and sold or offered for sale;

(3) "aquatic plant" means a plant indigenous to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(4) "commissioner" means the commissioner of fish and game;

(5) "hatchery" means a facility for the artificial propagation of stock, including rearing of juvenile aquatic plants or shellfish;

(6) "insignificant population" means a population of shellfish that, in the determination of the commissioner, would not attract and support a commercial fishery for that species of shellfish and the harvest and sale of the shellfish would not result in significant alteration in traditional fisheries or other existing uses of fish and wildlife resources if the population were included within an aquatic farm site;

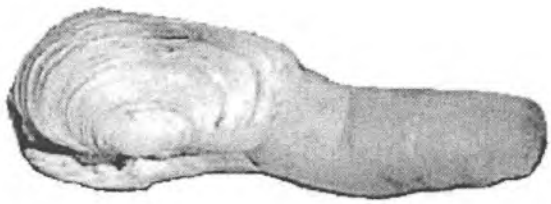
(7) "positive control" means, for mobile species, enclosed within a natural or artificial escape-proof barrier; for species with limited or no mobility, such as a bivalve or an aquatic plant, "positive control" also includes managed cultivation in unenclosed water;

(8) "shellfish" means a species of crustacean, mollusk, or other invertebrate, in any stage of its life cycle, that is indigenous to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(9) "stock" means live aquatic plants or shellfish acquired, collected, possessed, or intended for use by a hatchery or aquatic farm for the purpose of further growth or propagation.

Interesting Geoduck Facts

Latin name: *Panopea abrupta* (Conrad, 1849)
Superfamily: Hiatellidae
Family: Hiatellidae



- **"The common name for geoduck has a native American origin, meaning "dig deep", a reference to humans or sea otters digging them. The scientific name is *Panopea abrupta* (Conrad, 1849) and I believe it is the largest intertidal clam in the world. It is the largest species of Panopea."**
  Harbo, R.1997.Shells and Shellfish of the Pacific Northwest".

- **The geoduck clam is sometimes spelled: goeduck, goiduck, or gweduck.**

- **The Chinese call the geoduck the "elephant trunk clam"**

- **Native to the northern Pacific coasts of Canada and the United States of America, that is, along the coasts of Washington state and the province of British Columbia. About 109 million adult geoducks are packed into Puget Sound's sediments the biggest bunch of marine animals in the Sound.**

- **The geoduck is the largest intertidal clam (and the largest burrowing clam) in the world with an average weight of approximately 1 kg (2.2 lbs) in B.C. and a shell length to 195 mm (7").**
  - **"I had one of these (Panopea abrupta) on display here at the Seattle Aquarium that was 13 pounds, and I've heard of bigger ones. They are generally credited with being the deepest digging clam, the biggest burrowing clam and it's possible that the geoduck is one of the longest-living mollusks."**
    Roland C. Anderson, PhD; Puget Sound Curator, The Seattle Aquarium (Source)

- **Huge geoducks have been recorded weighing up to 4.5 kg (10 lbs) Hand et al.1996, Harbo 1997 with larger denizens of the deep reported by fishermen in the field. (Source)**
  The maximum documented weight: 7.15 kgs. (Sources differ on this point)

- **Age and growth studies have shown that geoduck clams grow about one inch per**

year in shell length for the first four years of life. The growth rate is gradually reduced after this time. The average size of 2.2 pounds is reached in five to six years.

- Average Age: Adults may live to over 140 years and reach a maximum shell length of 23 cm. Geoducks are among the longest-lived animals in the world. Growth-ring analysis shows many individuals live for more than 100 years. They grow rapidly in the first 10-15 years (approximately 1 inch per year), after which time the growth in shell length almost ceases and is replaced by a thickening of the shell and a slow increase in body weight.

- Oldest Recorded Age: 146 to 168 years (sources differ on this point).

    - "The neck of a geoduck can stretch to 1 meter, from the body and shell of this clam. When the clam is harvested (by divers, using high pressure water jets), the neck contracts. The oldest clam aged from British Columbia is 168 years old!" "
      Harbo, R.1997.Shells and Shellfish of the Pacific Northwest".

- Geoducks are most often found at depths between 10 and 80 feet below the mean low tide mark, but have been reported at depths reaching 360 feet. Average depths from another source: subtidal, from 8 to 120 m depth

- They bury themselves up to a meter deep in sand, silt, gravel and other soft substrates. A developing geoduck will burrow into sediment at an approximate rate of 1 foot per year. After digging about 3 feet deep, the adult geoduck settles in for 100 years or more.

- Siphons and neck cannot be withdrawn into their shell. In burrowed adults, the siphon may stretch 39 inches to the sea bed.

- Geoducks have separate sexes. Spawning occurs annually, primarily from Late April to July, when waters are warm. Females release from 7-10 million eggs, which develop through several stages in the water column until settling on the bottom within 40-50 days. At a shell length of 2 mm, they burrow into the substrate and can bury to a refuge depth of 60 cm in two years. They are sexually mature by 3 yrs.

- The of the geoduck is thin, it lacks teeth, and it may attain a length of 8 in. (20 cm). The valves, or two parts of the shell, are always open in the adult, because the body and siphons are too large to be retracted.

- The geoduck feeds on phytoplankton (single-celled marine algae), mostly diatoms and flagellates. Due to it's diet, one must be careful of paralytic shellfish poison (PSP) or "red tides". Check with autorities if unsure wheter or not there is a red tide before attempting to invite a geoduck for lunch. Red tides are harmless to the clams, but they can be fatal to humans.

- As Food: The neck can be cut or ground and used in chowders. The body meat, when sliced, pounded and sautéed it resembles abalone. Although they are edible,

they are not widely marketed due to their inaccessibility. They are exposed for only a few hours a month, during minus tides, and even then only a very fast person digging with a shovel can attempt to dig out this fast burrowing clam. (Note: sport limits for the stae of Washington are three per day)

- See the Underwater Harvestors Page for information of purchasing, storing, preparing and recipes for geoducks
- The prime meat comes from the neck, which may be up to 24-inches when fully extended, and the mantle can be cut or ground and used in chowders. The neck meat is often used in sushi or minced into patties and quick fried.
- Welcome to Geoduck Recipes: not only recipes but an introduction to geoduck aquaultue. By Grant Jones and his wife, Ashley.
- Mirugai Sushi: Source

- Predators: sea stars, crabs, fishes, and birds.

- SCUBA divers utilize high-pressure water to "dig" out the geoduck. The divers wear dry suits for protection from the cold water and they are supplied with air pumped down to them through a flexible hose from a compressor onboard a fishing boat. They must wear heavy weights to keep them submerged. Divers walk along the bottom for geoduck shows, which are the visible exposed tip of a siphon or dimple left in the sand from a retracted siphon. The divers then use a nozzle fed with high pressure water from the fishing boat above them to liquefy the sand around the geoduck thus removing the clam. The geoduck is then placed into a bag clipped to their waist. Divers are in constant communication with their boat via high tech diver to ship communications.

Resources Used for this Page and Other Sites on the Geoduck:

- The Columbian (2007) another good facts page
- Canada Fishery Management:
- Geoduck.org - Canada
- Fact Sheets - Geoduck
- Geoduck clam (Panopea abrupta): Anatomy, Histology, Development, Pathology, Parasites and Symbionts
- Geoduck farms considered - As many as 10 operations could be started along the coast ... Nicholas Read, Vancouver Sun
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- Three Feet Under
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- NOAA FAQs
- Roland C. Anderson, PhD; Puget Sound Curator, The Seattle Aquarium
- Science
- Wikipedia
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- King Clam
- Oceans Alive
- Puget Sound Online - Current Creature- Puget Sound Sealife
- Seatlepi.com: Cashing in on geoducks
  Once chowder fodder, the giant clam can fetch up to $24 a pop
- To Prepare Geoduck For The Table.....
- The Geoduck Aquaculture Program
- Shellfish Commercial Fisheries - Geoduck - Southeast Alaska and Yakutat
  CURRENT NEWS RELEASES AND FISHERY UPDATES
- Seattle Times: 'Duck' is a misnomer for bountiful 'King Clam'
- Monteray Aquarium - Geoduck Clams
- GOOEY DUCKS (geoducks) fun site
- A Geoduck Blows Bubbles at Dungeness Spit

Comments From My Viewers

- Geoducks may be the fastest flying clam but they settle in they are not going win any races with with any other animal except another geoduck. Thanks for you info, Bill Lackner

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3 FEET UNDER

Digging Deep for the Geoduck Clam

a documentary for those who let it all hang out

As seen on PBS stations

Directed by Justin Bookey
63 min., digital video. Available on DVD.

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The geoduck ("gooey duck") clam sports a phallic, three-foot-long neck and a life span of 160-plus years. 3 FEET UNDER explores how it has garnered a quirky yet devoted following in the Pacific Northwest.

view trailer

Alutiiq Pride Shellfish Hatchery
PO Box 369
Seward, AK 99664
907 224-5181 224-5282 fax
jih@seward.net

January 21, 2011

Representative Paul Seaton
State Capitol, Room 201
Juneau, Alaska 99801

Dear Representative Seaton:

The Alutiiq Pride Shellfish Hatchery appreciates your efforts with House Bill 60. We rely upon shellfish seed sales to cover portions of our operating expenses. Geoducks and their high value offer us the best opportunity to achieve our sales goals. To date, the demand has not been originally projected causing a perpetual shortfall in revenue. Opening additional markets in south-central Alaska will help alleviate this deficit.

We are often frustrated by the Alaska Department of Fish and Game and their regulation of transport. It is ironic that we can transport a non-indigenous species such as oysters and cannot transport a native species outside what is considered its natural range. The fact that it will probably be non-reproductive in south- central Alaska should make management easy.

I would suggest we promote a cooperative demonstration project exploring the feasibility of geoduck farming in south-central Alaska headed by the Department of Fish and Game, the Department of Commerce and the Chugach Regional Resources Commission. The shellfish hatchery can provide geoduck seed for such an effort.

Sincerely,

Jeff Hetrick, Director

EVERGREEN
THE EVERGREEN STATE COLLEGE
OLYMPIA, WASHINGTON

The Geoduck

The Geoduck Fight Song

words and music by Malcolm Stilson, 1971

Go, Geoducks go,
Through the mud and the sand,
let's go.
Siphon high, squirt it out,
swivel all about,
let it all hang out.

Go, Geoducks go,
Stretch your necks when the tide
is low
Siphon high, squirt it out,
swivel all about,
let it all hang out.

What is a Geoduck?

The geoduck is a mollusk native to the Pacific Northwest. The geoduck (pronounced "GOO-ee-duck") is the largest burrowing clam in the world, weighing in at anywhere from one to three pounds at maturity. The appearance of geoduck's large, protruding siphon has led to the belief that the geoduck has the properties of an aphrodisiac. The geoduck has a life expectancy of up to 150 years with the oldest recorded at 163 years.

For more on the geoduck visit the *geoduck Wikipedia page* *(http://en.wikipedia.org/wiki/Geoduck)*.

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