REPORT ON BEADS SUBMITTED BY MRS. WM. S. GODFREY OF THE UNIVERSITY MUSEUM TO THE ACADEMY OF NATURAL SCIENCES FOR IDENTIFICATION

Two kinds of beads made up the lot:

(1) Feldspar variety microcline; also known as AMAZONSTONE. Green beads with white, intersecting lines visible under a lens.

(2) JADE beads, which are mineralogically JADEITE-DIOPSIDE.

An analysis by Horace J. Hallowell on a single bead, showed it to be composed of the Jadeite and Diopside molecules in the proportion 2 : 1. His results follow:

SiO_2	58.98
TiO_2	0.01
Al_2O_3.....	18.13
Fe_2O_3	0.69
Cr_2O_3	0.04
FeO	0.90
MnO	0.04
MgO	5.18
CaO	6.33
Na_2O	9.75
K_2O	0.03
H_2O + ...	0.33
H_2O -	0.28

← Evidently L-27-36(W-17-8) see garden notes on returned list

A physical examination by Samuel G. Gordon of a granular, emerald green bead resulted as follows:

Specific gravity ..... $d\ {}^{0^\circ}_{19^\circ}C$ equals 3.23

Indices of refraction .... α equals 1.660
β equals 1.671
γ equals 1.683

Extinction angle..... a:c equals 40°.

A thin section made from a bead by Mr. Frank J. Keeley, showed a granular texture with wavy extinction over the grains. Very little albite was visible.

NOTE: The tern JADE includes three different minerals:

(1). The mineral Jadeite, (a pyroxene) more or less admixed with Albite; the Asiatic Jades, in part.

(2). The mineral JADEITE-DIOPSIDE, which is a molecular solution of the jadeite and diopside molecules in varying proportions: the Central American Jades.

(3). NEPHRITE, a fibrous compact amphibole; some of the Asiatic Jades, and those from New Zealand, and Europe.

Samuel G. Gordon

Stone and minerals for identification.

1 small piece of ~~hematite~~. (from mosaic mirror). Pyrite altered on surface to limonite

L-27-22 W-17-12	Jade bead	Jade
L-27-27 W-17-40e	Jade object	Jade
L-27-31 W-17-8	String of Jade beads	Jade (Diopside-density of 3.28)
L-27-34 W-17-40d	Match-box containg three small pieces of worked jade.	Jade
L-27-36 W-17-8	String of beads ~~(turquoise?)~~	{Feldspar variety microcline amazonstone (string)

one possible exception: bright green bead may be amazonstone.
(pink with string L-27-36)

Central-American Jades are mostly Diopside-jadeite

Diopside

James A. Gordon

L-27-23 analyzed by Mr. Gordon - probably destroyed by process

Piedras Negras, 1932.
Johnson Expeditions
Nov. 10, 1932.

2nd Memorandum list of Stone & minerals for identification.

✓	L-27-4	(W-6-21f)	Fragment of celt? Serpentine
✓	L-27-6-a -b	(W-6-21-h)	Two small fragments Calcite
✓	L-27-53	(W-17-76)	Copal? a Weathered limestone
✓	L-27-89	(W-28-7)	~~Flint or~~ chert knife
✓	L-27-94	(S-1-30)	~~Flint or~~ chert knife
✓	L-27-95	(S-1-31)	Flint ~~or chert~~ point, spear-head?
✓	L-27-97	(S-1-42)	Chert ~~Flint~~ (?) nodule (?) - hammer-stone.
✓	L-27-163	(S-1-48)	Frahment of cylindrical mano stone Volcanic rock
✓	L-27-164n	(S-1-32)	Ditto. Limestone
✓	L-27-165	(S-1-38)	Fragment of carved stone a Granitoid igneous rock
✓	L-27-166	(S-5-1)?	Fragments of cylindrical mano stones. Limestone
✓	L-27-176	(E-1-159)	Fragment of clay-stone? tube? Clay
✓	L-27-47	(W-17-24 & -39)	Fragments of back of mirror- shale? Shale

As identified by sight by

Frank J. Kealey

Samuel G. Gordon

Piedras Negras, 1932.
Johnson Expeditions
Nov. 10, 1932.

2nd Memorandum list of Stone & minerals
for identification.

L-27-4	(W-6-21f)	Fragment of celt? Serpentine
L-27-6-a -b	(W-6-21-h)	Two small fragments Calcite
L-27-53	(W-17-76)	Copal? Weathered limestone
L-27-89	(W-28-7)	Flint or chert knife chert
L-27-94	(S-1-30)	Flint or chert knife chert
L-27-95	(S-1-31)	Flint or chert point, spear-head? Flint.
L-27-97	(S-1-42)	Flint (?) nodule (?) - hammer-stone. Chert
L-27-163	(S-1-48)	Frahment of cylindrical mano stone Volcanic Rock
L-27-164n	(S-1-32)	Ditto. Limestone
L-27-165	(S-1-38)	Fragment of carved stone granitoid igneous rock.
L-27-166	(S-5-1)?	Fragments of cylindrical mano stones. Limestone
L-27-176	(E-1-159)	Fragment of clay-stone? tube? clay
L-27-47	(W-17-24 & -39)	Fragments of back of mirror- shale? Shale

Identified by
Frank D. Keeley
& Samuel G. Gordon.

Returned 11/12
FG

Memorandum List of Identifications
by Academy of Natural Science, Phila., 1932.

Shell

Morum tuberculatum (Sowb.); a marine shell from the west coast of Mexico or Central America. "Panamic ~~xhaixx~~ Province shells range from Panama to Gulf of Califormia.

L-27-40 (the unbroken shell)

Spondylus limbatus~~x~~ Brod. - same range as Morum.

L-27- 39
L-27- 44
L-27-52
L-27-78-a,b & c
L-27-79
L-27-80

Spondylus ~~xixx~~ princeps Brod; marine shell from west coast of Mexico or Central America (see note under L-27-40)

L-27-50

Quadrula quadrata Simps; fresh water (Guatemalan) species.

L-27-49
L-27-51
L-27-57

but fresh water, Guatemalan.

Pomacea, fragments of immature shell, species not determinable,/

L-27-5

Pomacea ghiesbreghti (Reeve), also called "Ampullaria ghiesbreghti"; fresh water (Guatemalan) species.

L-27-152

Pachycilus indiorum (Morelet); native of Guatemala

L-27-40 (the broken shell)

Shell for Identification

Johnson Expeditions
University Museum.

Nov.3, 1932.

L-16-16 (E-1-11)	1 univalve shell (cut?) Lithopoma tuber (L) from Gulf of Mexico or Carribean.
L-16-17 (E-1-11)	1 shell ? Vermicularia spirata (Phil.)
L-16-36 (E-1-22)	1 inivalve shell Pomacea flagellata tristrami C&F; fresh water, probably local.
L-16-347 (E-1-109)	part of bi-valve Arca umbonata Lam. from Gulf of Mexico or Carribean.
L-16-380 (E-1-122)	1 piece coral? Coral, species undeterminable.
L-16-773-a (W-1-40-f)	Fragmentary univalve shell not identified (snail?)
L-16-773-b "	Fossil univale Cast of undeterminable gastropod, from Gulh of Mexico of Carribean.
L-17-176 (SE-1-19)	Fragment of conch? Strombus, species uncertain.
L-27-155 (fire)	Bivalve shell (burned) Cardium robustm Sol., from Gulf of Mexico or Caribbean.
L-16-768(W-1-40-e)	3 spines, 1 in match-box with 2 fish-vertebra(?).
L-16-348 (E-1-109)	1 spine
L-17-122 (SE-1-10)	1 spine
L-17-405-a (E-1-?)	4 spines?
-b	
-c	
-d	
L-27-81-a (E-1-154)	1 spine.
L-27-46-a to J incl	Spines with heiroglyphs.
L-27-46-k to w	Spines.
(W-17-49.)	

Sting ray, family or species not determinable.

Desired information: species; habitat.

If you possess a duplicate of
L-27-49, Quadrula quadrata,
I would very much like
to have one for the Academy
as we do not have that
species in the collection

H. A. Pilsbry

CABLE ADDRESS—*Acadsci Philadelphia*

THE ACADEMY OF NATURAL SCIENCES
OF PHILADELPHIA
FOUNDED 1812
NINETEENTH AND THE PARKWAY

DEPARTMENT OF MOLLUSKS AND MARINE INVERTEBRATES
HENRY A. PILSBRY
CURATOR

CHARLES M. B. CADWALADER
MANAGING DIRECTOR

October 29, 1932

Mr. Linton Satterthwaite,
University Museum,
Philadelphia, Pa.

Dear Mr. Satterthwaite:

The species of Spondylus and Morum are marine shells from the west coast of Mexico or Central America; more definite locality not determinable, as these "Panamic Province" shells range from Panama to the Gulf of California.

The Quadrula, Pachychilus and Pomacea are fresh water shells, these species being Guatemalan.

Very truly yours,

H. A. Pilsbry

Henry A. Pilsbry

HAP.LM

Piedras Negras Exped., 1932 - Shell for identification.

L-27-50	Bi-valve shell
L-27-52	Bivalve shell, 2 pieces.
L-27-80	Bi-valve shell
L-27-44	Parforated plates cut from bivalve shell (6 plates).
L-27-39	F agment of shell
L-27-78a	Small figuring cut from shell
L-27-78b	Small ornament " " "
L-27-78c	Small piece of shell (cut out).
L-27-79	Three shell fragments.
L-27-51	Two fragments of bivalve shell
L-27-49	Bivalve shell — W-17-40a
L-27-57	Small fragment of shell.
L-27-40	Two pendants cut from small univalve shells, one broken.
L-27-152	Large univalve shell, with two perforations.
L-27-5	Match-box containing shell fragments.

undet. Pomacea.

10
5000

Linton Satterthwaite - University Museum

10,000
2,000
50
450
9,500

cat	L-27-40	Morum tuberculatum (Sowb.)
cat	L-27-~~9~~ (79)	Spondylus limbatus Sowb.
cat	39	
cat	44	
cat	52	" "
cat	78a,b,c.	
cat	79	
cat	80	
cat	L-27-50	Spondylus princeps Brod.

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cat	L-27-49	Quadrula quadrata Simps.
cat	51	
cat	57	
cat	L-27-152 (S-1-40-d)	Pomacea ghiesbreghti (Reeve) (Also called "Ampullaria" ghiesbreghti)
cat	L-27-5	Pomacea, fragments of an immature shell, species not determinable, perhaps same as preceding.
	L-27-40	Pachychilus indiorum (Morelet)

H. A. Pilsbry
Acad. Nat. Sciences

Mr. Fowler, our ichthyologist, tells me that it is not possible to say definitely even the species to which they belong the family of these spines. They are clearly sting ray spines, but may represent species of several different families. The differential characters are not evident in the spines.

J. A. G. R.

Rec'd Jan 12, 1933 (Academy)

L.16.36 Pomacea flagellata tristrami C&F.
(three pieces of one shell).

L.17.176 Strombus, species uncertain.

L.16.380 Coral, species undetermined.

L.16 773-b. Undetermined cast of a gastropod.

L.16.347 Arca umbonata Lam.

L.27.155 Cardium robustum Sol.

L.16.16. ~~Cittara tuber~~ &
Lithoporna tuber (L.)

L.16.17. Vermicularia spirata (Phil.)

L.16.36 is a fresh water shell, probably local. All the rest are marine, and so far as identified all are Gulf of Mexico and Caribbean species.

H.A.P.

Pd'd Jan 21, 1933

Mr. Rehn

1/1000

.07/100

.0175

1.75 mm.

1/25 .18/25

1.18 1 3/4/25.

07

Johnson Expeditions.
University Museum.

Memorandum list of bones for identification:

L-16-769	(W-1-40-E)	Phalange Jaguar? Certainly large cat.
L-27-45	(W-17-85)	Carved Moan effify. Proximal portion of ulna of a jaguar.
L-27-58	(W-17-40-i)	4 phalanges & bird claw? Probably all jaguar toe-bones: certainly large cat, some
L-27-60	(W-17-17)	2 phalanges? not determinable. too large for anything but jaguar.
L-27-61	(W-17-30)	phalange? Bird bones.
L-27-62	(W-17-31)	" ? Not identifiable.
L-27-63	(W-17-30)	tooth Tooth of one of the larger cats, probably jaguar.
L-27-64	(W-17-89)	phalange? Jaguar? Certainly large cat.
L-27-65	(W-17-90)	" ? ~~xBirdxbonesxx~~ Not determinable. Bird bones
L-27-66	(W-17-90)	~~2 phalanges?~~ Turtle, probably soft-shelled ~~xx~~ (Triony x); Peccary bones & teeth, species not determinable; long
L-27-186	~~xxxxxx~~ (S-1-10)	~~28 bone fragments~~ bones of deer (?); miscl. bones, probably of
L-27-187	(S-1-21	19 pieces, bone fragments & hoofed animals. teeth ~~typewriter.~~ Deer, species Odocoileus (?); and Peccary (species not determinable)
L-27-192	(S-8-2)	1 bone fragment Section of human radius
L-27193	(S-8-4)	5 bone fragments & 1 phalnage? Ungulate, probably deer (Odocoileus)
L-27-194	(S-12-1)	1 bone fragment. Not identifyable.

Desired information: species, any possible information as to age, parts of animal represented:

Received back Jan 12, 1933.

Note these identifications evidently typed in here from memo or letter received. If is misfiled - might be able to find who did it for us.

OVER

Add the following to list on the other side:

L-27-185 (S-2-28) 5 fragments (human?) Human femur.

L-27-188 (S-1-41) 1 part of small mandible, with teeth. Lower left jaw of Opossum, species Didelphis.

L-27-189 (S-2-13) 3 fragments Large fragment from humerus of deer (species Odocoileus); others undeterminable.

L-27-190 (S-2-23) 10 fragments Probably old deer, species Odocoileus.

L-27-191 (S-7-1;3-6; S-7-9) 13 fragments, incl. part of skull, phalanges, &c.-felis?

End of peccary humerus; portions of pelvis and calcaneum (heel-bone) of deer (species Odocoileus); and 4 fragments (restored) of human cranium. N.B. The carnium shows supraobbital ridge and pronounced flatening of the frontal bone.