Beads Classification

Janeena Nonis, D.Thusitha Mendis

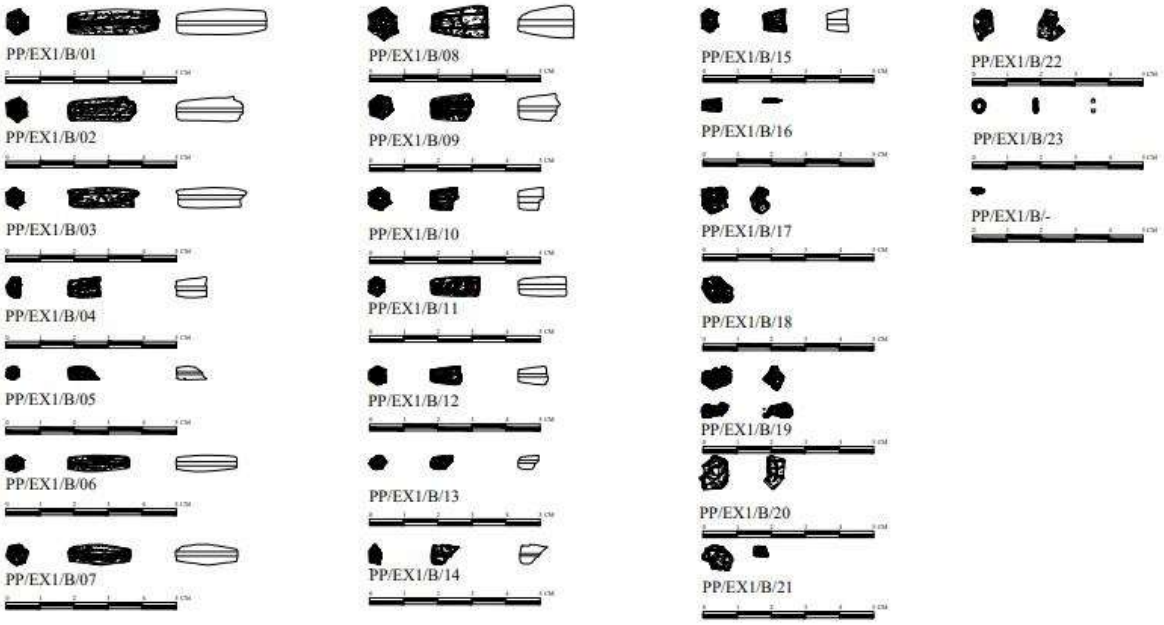
Introduction

Beads; recognized as essential artifacts that can be retrieved from Proto-historic settlements as well as from Megalithic burial sites. A large number of beads found from Ibbankatuwa, dating back to 500-400 BC and majority of them were made of exotics that originated hundreds of miles away in the peninsular India such as carnelian, onyx and gold (Karunarathna,2010). 171 of beads identified from Pomparippu and most of the beads are of paste, frequently in shades of red, orange and yellow although some have green, grey and brown pigmentation as well (Begley,1981). In 2001 an excavation propagated on megalithic burial site in Pinwewa-Galsohonkanatta and retrieved 199 of beads. Among them assemblies associated with glass, carnelian and feldspar were identified (Jayarathna,1997). In 2016 the megalithic burial site of Kok-ebe, dating back to 8th century BC was excavated and around 80 beads were found. Beads made by steatite were recorded as special artifacts as they reflect the long distance resource manipulation in contemporary period (Mendis,2017). 31 of beads were retrieved from Andarawewa archaeological site dated to 500-600 BC and also it is special to found glass production-related evidence as furnace wall, and drawn glass bead tubes (Mendis,2019). Considering these bead-related artifacts, a vast variation can be identified according to their material, color, shape, size, perforation, technology and etc. Through a successful classification based on relevant facts, Beads would be useful to develop hypothesis and interpretations on interaction between chronological and spatial order of ancient culture.

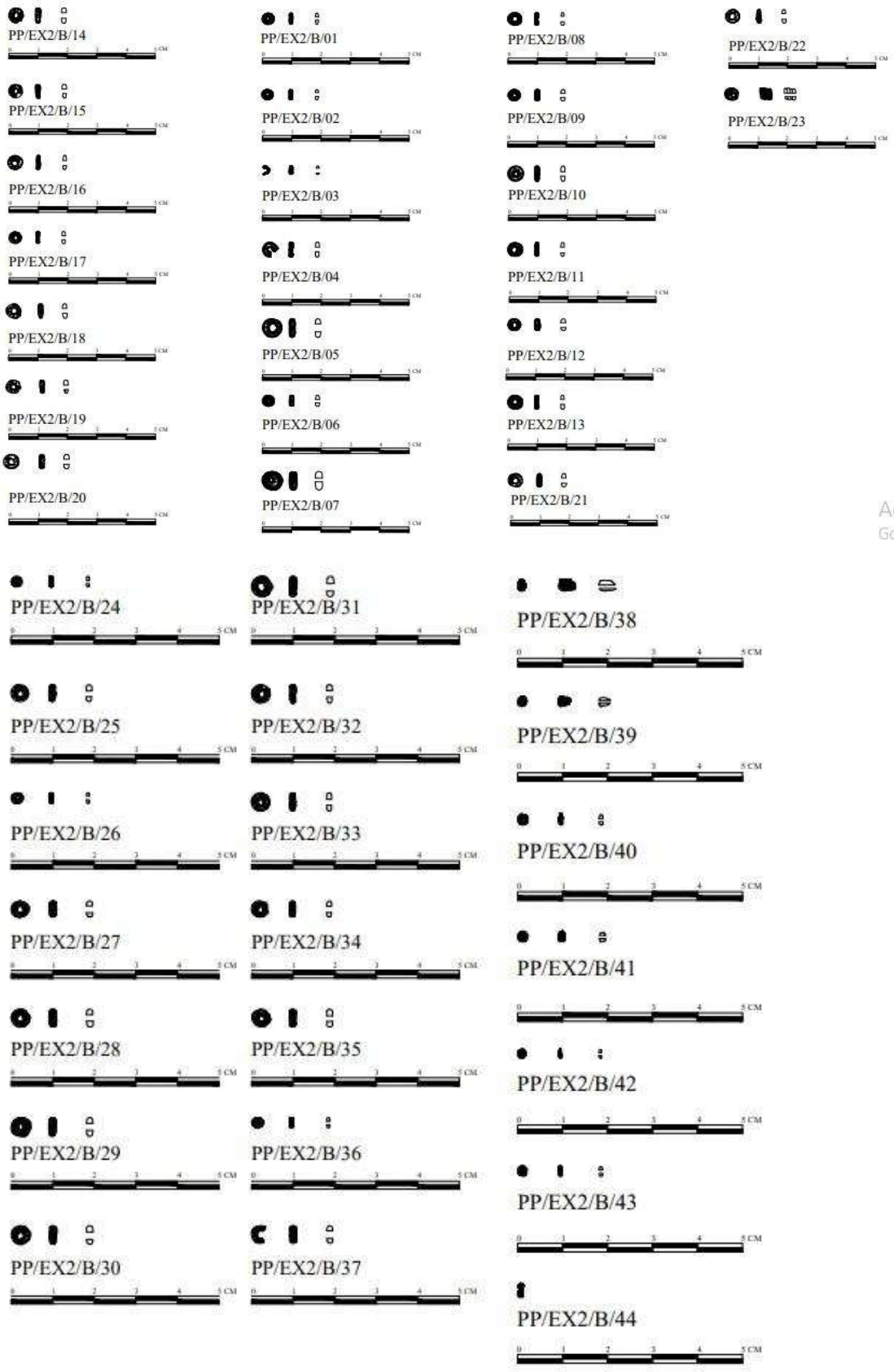
In the context of Sri Lanka, Anne Deraniyagala, James Lankton, Peter Francis attempted to create classifications on beads found from different archaeological sites as Thissamaharama, Godawaya and Mantai. However, a void can be seen of the studies done with a particular reference to beads and fragments retrieved from Megalithic burial sites and in most given cases, such studies are included as one chapter of a widespread project. Even though they contain the physical features of beads, they do not contain a complete classification. Hence, this research attempts to create a formal classification based on beads discovered from Palippothana in combination with Kok-ebe and Andarawewa megalithic burial sites.

Beads of Palippothana Burial Site

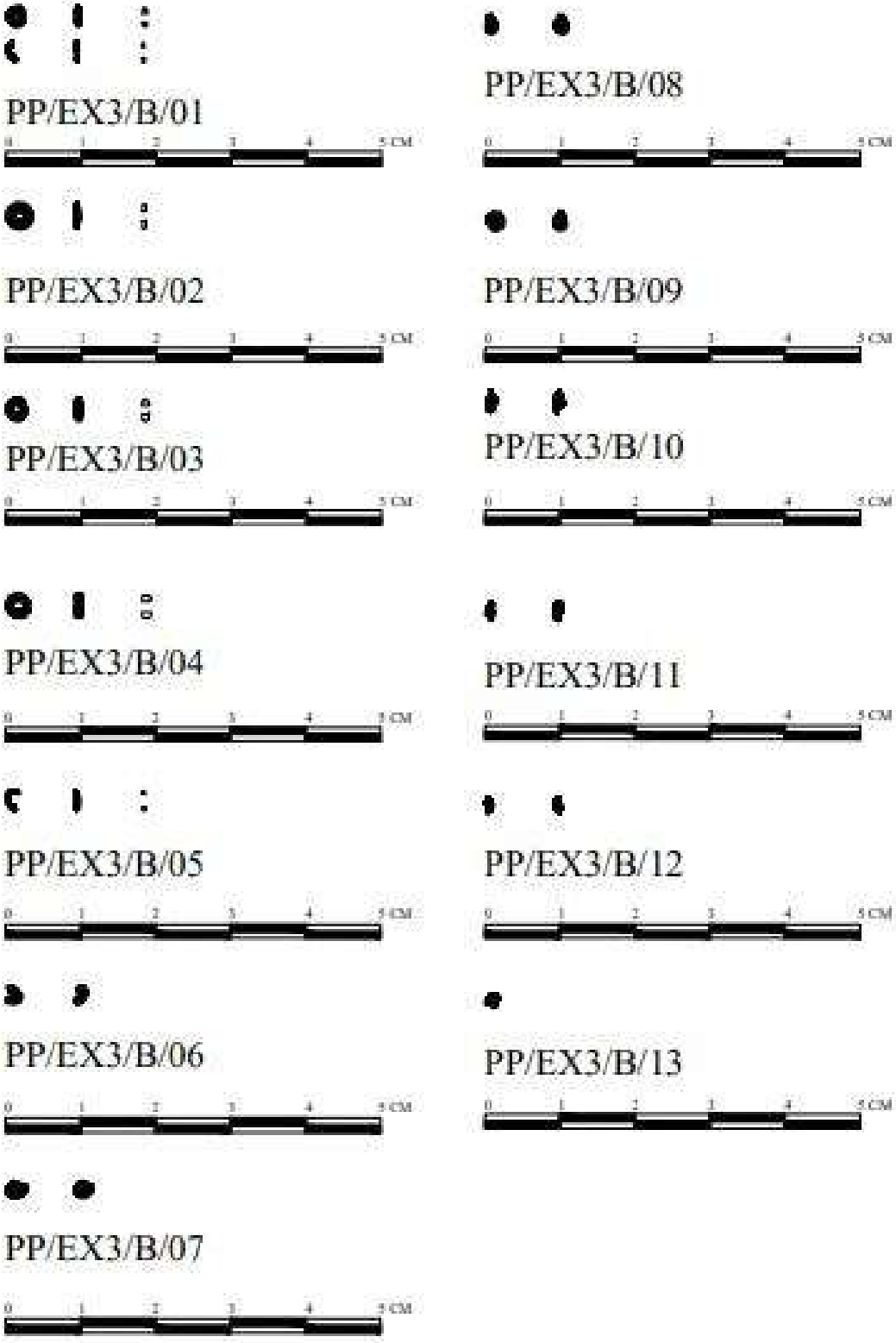
The Rajarata University of Sri Lanka conducted a preliminary exploration on Palippothana burial site in 2019 and propagated an excavation in 2020. 80 beads and bead-related fragments retrieved from 3 excavation pits and most of them recorded as glass beads. 22 of Quartz beads also were found and recognized as special finds, since they influenced with Long Hexagonal shape.



Plan 12-1 Bead of RUSL/PP/EX1/2020



Plan 12-2 Bead of RUSL/PP/EX2/2020



Plan 12-3 Bead of RUSL/PP/EX3/2020

Figure 12-1 Bead of RUSL/PP/EX1/2020

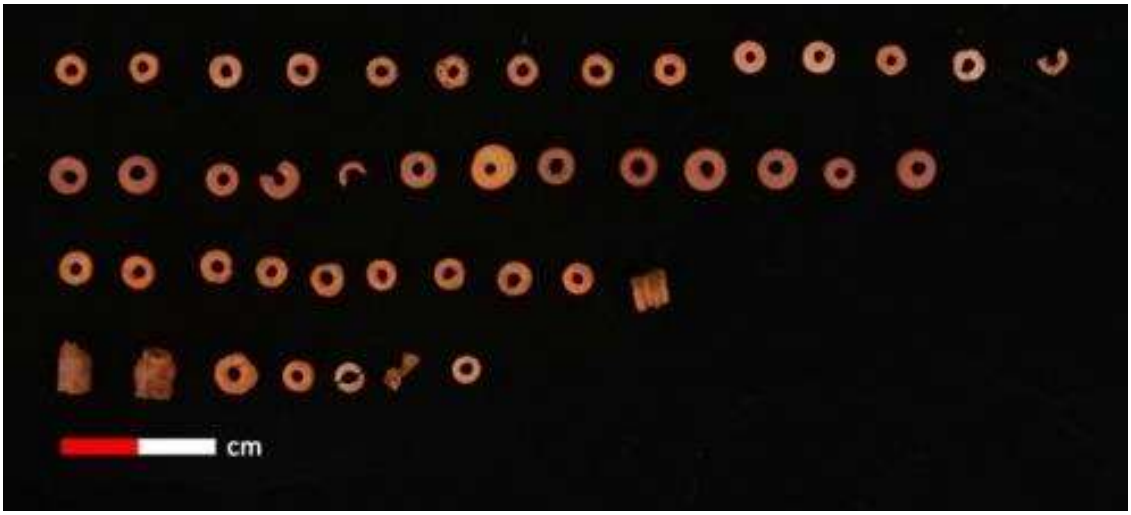


Figure 12-2 Bead of RUSL/PP/EX2/2020

Figure 12-3 Bead of RUSL/PP/EX3/2020

Details of the beads yielded from RUSL/PP/EX1/2020

S/N	REG.NO	PIT	X (cm)	Y (cm)	Z (m)	CONTEXT	LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)	PERFORATION (cm)	MATERIAL	COLOR	TYPE
1	PP/EX1/B/01	C2	152	161	150.527	13	3.1	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
2	PP/EX1/B/02	D2	38	183	150.566	3	2.5	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
3	PP/EX1/B/03	D2	77	193	150.543	13	2.3	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
4	PP/EX1/B/04	D3	35	80	150.389	3	1.2	0.7	0.4	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
5	PP/EX1/B/05	C2	75	103	150.341	3	1.5	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
6	PP/EX1/B/06	C1	137	260	150.285	3	3.1	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
7	PP/EX1/B/07	C2	196	182	150.453	13	2.8	0.8	0.8	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
8	PP/EX1/B/08	D2	52	193	150.509	3	1.6	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
9	PP/EX1/B/09	D1	70	239	150.595	3	1.2	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
10	PP/EX1/B/10	B2	208	151	150.523	13	0.8	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
11	PP/EX1/B/11	D2	60	140	150.504	3	2.1	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
12	PP/EX1/B/12					3	1.5	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
13	PP/EX1/B/13					3	1	0.7	0.7	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
14	PP/EX1/B/14					3	0.7	0.6	0.3	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
15	PP/EX1/B/15	D2	30	170	150.52	3	0.7	0.6	0.5	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
16	PP/EX1/B/16	D1	212	52	150.568	3	0.9	0.6	0.2		Quartz	Transparent	Long Hexagonal Truncated Bicone
17	PP/EX1/B/17	D2	16	94	150.448	3	0.6	0.6	0.4	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
18	PP/EX1/B/18	D3	70	30	150.478	3	0.6	0.5	0.4	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
19	PP/EX1/B/19	C2	86	185	150.457	3	0.6	0.6	0.4	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
20	PP/EX1/B/20	D2	90	122	150.341	20	0.6	0.3	0.3	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
21	PP/EX1/B/21	D2	26	140	150.491	3	0.7	0.2	0.3	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
22	PP/EX1/B/22	D2	26	140	150.491	3	0.6	0.4	0.3	0.1	Quartz	Transparent	Long Hexagonal Truncated Bicone
23	PP/EX1/B/23	A2	100	110	150.619	3	0.4	0.3	0.09	0.2	Glass/Semi-glass	Red 10R 4/6	Annular Barrel Disc

Table 12-1 Details of the beads yielded from RUSL/PP/EX1/2020

Details of the beads yielded from RUSL/PP/EX2/2020

S/N	REG.NO	PIT	X (cm)	Y (cm)	Z (m)	CONTEXT	LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)	PERFORATION (cm)	MATERIAL	COLOR	TYPE
1	PP/EX2/B/01	C1				6	0.1	0.5	0.5	0.2	Glass (semi)	Red 10R 4/6	Circular Barrel Disc
2	PP/EX2/B/02	C1				6	0.12	0.4	0.4	0.2	Glass (semi)	Red 10R 4/6	Short Barrel Circular
3	PP/EX2/B/03	C1				6	0.1	0.4	0.4	0.23	Glass (semi)	Red 10R 4/6	Annular Short Barrel Circular
4	PP/EX2/B/04	C1	110	250	150.289	6	0.1	0.5	0.5	0.2	Glass (semi)	Red 7.5YR 4/6	Circular Barrel Disc
5	PP/EX2/B/05	C1	188	293	150.165	6	0.15	0.5	0.5	0.3	Glass (semi)	Red 7.5YR 4/6	Annular Short Circular Pear-shape
6	PP/EX2/B/06	C1	177	275	150.21	6	0.15	0.5	0.5	0.2	Glass (semi)	Red 10R 4/6	Short Truncated Convex Bicone
7	PP/EX2/B/07						0.2	0.6	0.5	0.15	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
8	PP/EX2/B/08	C1	140	280	150.274	6	0.13	0.5	0.5	0.15	Glass (semi)	Red 2.5YR 4/6	Circular Pear-shape Disc
9	PP/EX2/B/09	C2	135	100	150.313	6	0.17	0.5	0.5	0.15	Glass (semi)	Red 10R 4/6	Short Circular Pear-shape
10	PP/EX2/B/10	C1	115	280	150.289	6	0.15	0.55	0.55	0.2	Glass (semi)	Red 10R 4/6	Annular Short Barrel Circular
11	PP/EX2/B/11	C1	106	280	150.265	6	0.13	0.5	0.5	0.2	Glass (semi)	Red 10R 4/6	Circular Barrel Disc
12	PP/EX2/B/12	C1	135	284	150.278	6	0.17	0.4	0.4	0.17	Glass (semi)	Red 10R 4/6	Short Barrel Circular
13	PP/EX2/B/13	C1	168	230	150.226	6	0.15	0.5	0.5	0.25	Glass (semi)	Red 10R 4/6	Annular Short Circular Pear-shape
14	PP/EX2/B/14	B2	257	152	150.289	10	0.12	0.4	0.4	0.25	Glass (semi)	Red 2.5YR 5/8	Annular Barrel Circular Disc
15	PP/EX2/B/15	B2	257	152	150.289	10	0.12	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Circular Barrel Disc
16	PP/EX2/B/16	B2	257	152	150.289	10	0.1	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Circular Barrel Disc
17	PP/EX2/B/17	B2	257	152	150.289	10	0.1	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Circular Barrel Disc
18	PP/EX2/B/18	B2	257	152	150.289	10	0.1	0.45	0.45	0.2	Glass (semi)	Red 2.5YR 5/8	Annular Barrel Circular Disc
19	PP/EX2/B/19	B2	257	152	150.289	10	0.13	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
20	PP/EX2/B/20	B2	257	152	150.289	10	0.13	0.4	0.4	0.25	Glass (semi)	Red 2.5YR 4/8	Annular Short Barrel Circular
21	PP/EX2/B/21	B2	257	152	150.289	10	0.13	0.45	0.45	0.2	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
22	PP/EX2/B/22	B2	257	152	150.289	10	0.12	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
23	PP/EX2/B/23	B2	257	152	150.289	10	0.46	0.4	0.4	0.15	Glass (semi)	Red 2.5YR 4/8	Segmented
24	PP/EX2/B/24	B2			150.26	10	0.1	0.4	0.4	0.15	Glass (semi)	Red 10R 5/8	Circular Barrel Disc
25	PP/EX2/B/25	B2			150.26	10	0.15	0.35	0.4	0.18	Glass (semi)	Red 10R 5/8	Circular Barrel Disc

26	PP/EX2/B/26	B2			150.26	10	0.1	0.4	0.4	0.17	Glass (semi)	Light Red 10R 6/8	Circular Barrel Disc
27	PP/EX2/B/27	B2			150.26	10	0.09	0.4	0.4	0.2	Glass (semi)	Red 10R 5/8	Annular Barrel Circular Disc
28	PP/EX2/B/28	B2			150.26	10	0.11	0.4	0.4	0.18	Glass (semi)	Red 10R 5/8	Circular Barrel Disc
29	PP/EX2/B/29	B2			150.26	10	0.14	0.4	0.4	0.15	Glass (semi)	Red 10R 5/8	Short Barrel Circular
30	PP/EX2/B/30	B2			150.26	10	0.13	0.4	0.4	0.18	Glass (semi)	Red 10R 5/8	Short Barrel Circular
31	PP/EX2/B/31	B2			150.26	10	0.13	0.4	0.4	0.18	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
32	PP/EX2/B/32	B2			150.26	10	0.11	0.4	0.4	0.18	Glass (semi)	Red 10R 5/8	Circular Convex Truncated Cone Disc
33	PP/EX2/B/33	B2			150.26	10	0.1	0.4	0.4	0.13	Glass (semi)	Red 2.5YR 5/8	Circular Convex Truncated Cone Disc
34	PP/EX2/B/34	B2			150.26	10	0.1	0.4	0.4	0.18	Glass (semi)	Red 2.5YR 5/8	Circular Barrel Disc
35	PP/EX2/B/35	B2			150.26	10	0.12	0.35	0.35	0.13	Glass (semi)	Red 2.5YR 5/8	Short Barrel Circular
36	PP/EX2/B/36	B2			150.26	10	0.09	0.4	0.4	0.2	Glass (semi)	Light Red 2.5YR 6/6	Annular Convex Truncated Cone Disc
37	PP/EX2/B/37	B2			150.26	10	0.18	0.4	0.4	0.2	Glass (semi)	Light Red 2.5YR 6/6	Annular Convex Truncated Cone Disc
38	PP/EX2/B/38	B2			150.23	10	0.68	0.43	0.43	0.05	Glass (semi)	Red 10R 4/8	Long Truncated Convex Cone
39	PP/EX2/B/39	B2			150.27	10	0.63	0.46	0.46	0.1	Glass (semi)	Red 10R 4/8	Long Truncated Convex Cone
40	PP/EX2/B/40	B2				10	0.16	0.55	0.55	0.26	Glass (semi)	Red 2.5YR 5/8	Oblate Disc
41	PP/EX2/B/41	B2				10	0.24	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Short Cylinder
42	PP/EX2/B/42	B2				10	0.09	0.35	0.35	0.24	Glass (semi)	Red 2.5YR 5/8	Annular Barrel Circular Disc
43	PP/EX2/B/43	B2				10	0.11	0.4	0.4	0.2	Glass (semi)	Red 2.5YR 5/8	Annular Barrel Circular Disc
44	PP/EX2/B/44	B2				10	0.2	0.5	0.2		Glass (semi)	Red 2.5YR 4/6	

Table 12-2 Details of the beads yielded from RUSL/PP/EX2/2020

Details of the beads yielded from RUSL/PP/EX3/2020

00	REG.NO	PIT	X (cm)	Y (cm)	Z (m)	CONTEXT	LENGTH (cm)	WIDTH (cm)	HEIGHT (cm)	PERFORATION (cm)	MATERIAL	COLOR	TYPE
1	PP/EX3/B/01	A1	70	84	150.47	6	0.08	0.31	0.4	0.15	Glass (Semi)	Red 2.5YR 4/8	Annular Barrel Circular Disc
2	PP/EX3/B/02	B1	90	124	150.39	16	0.09	0.55	0.55	0.2	Glass (Semi)	Red 2.5YR 4/8	Circular Barrel Disc
3	PP/EX3/B/03	A1	70	80	150.46	6	0.1	0.3	0.3	0.2	Glass (Semi)	Red 2.5YR 4/8	Annular Short Barrel Circular
4	PP/EX3/B/04						0.12	0.3	0.3	0.2	Glass (Semi)	Red 10R 5/8	Annular Short Cylinder
5	PP/EX3/B/05						0.08	0.4	0.4	0.2	Glass (Semi)	Red 10R 5/8	Piece of the bead
6	PP/EX3/B/06						0.2	0.4	0.3		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
7	PP/EX3/B/07						0.2	0.5	0.4		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
8	PP/EX3/B/08	B1	104	130	150.47	6	0.4	0.6	0.4		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
9	PP/EX3/B/09	B1	104	130	150.47	6	0.1	0.4	0.4		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
10	PP/EX3/B/10	B2	130	128	150.49	12	0.2	0.9	0.4		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
11	PP/EX3/B/11	B2	130	128	150.49	12	0.2	0.7	0.3		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
12	PP/EX3/B/12	B2	130	128	150.49	12	0.1	0.5	0.3		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead
13	PP/EX3/B/13	B2	130	128	150.49	12	0.3	0.4	0.25		Glass (Semi)	Red 2.5YR 4/8	Piece of the bead

Table 12-3 Details of the beads yielded from RUSL/PP/EX3/2020

Classification

Beads are primarily classified according to their shape, material and color. The classification was mainly influenced by H. Beck's Bead classification and his terms were used to propagate the study.

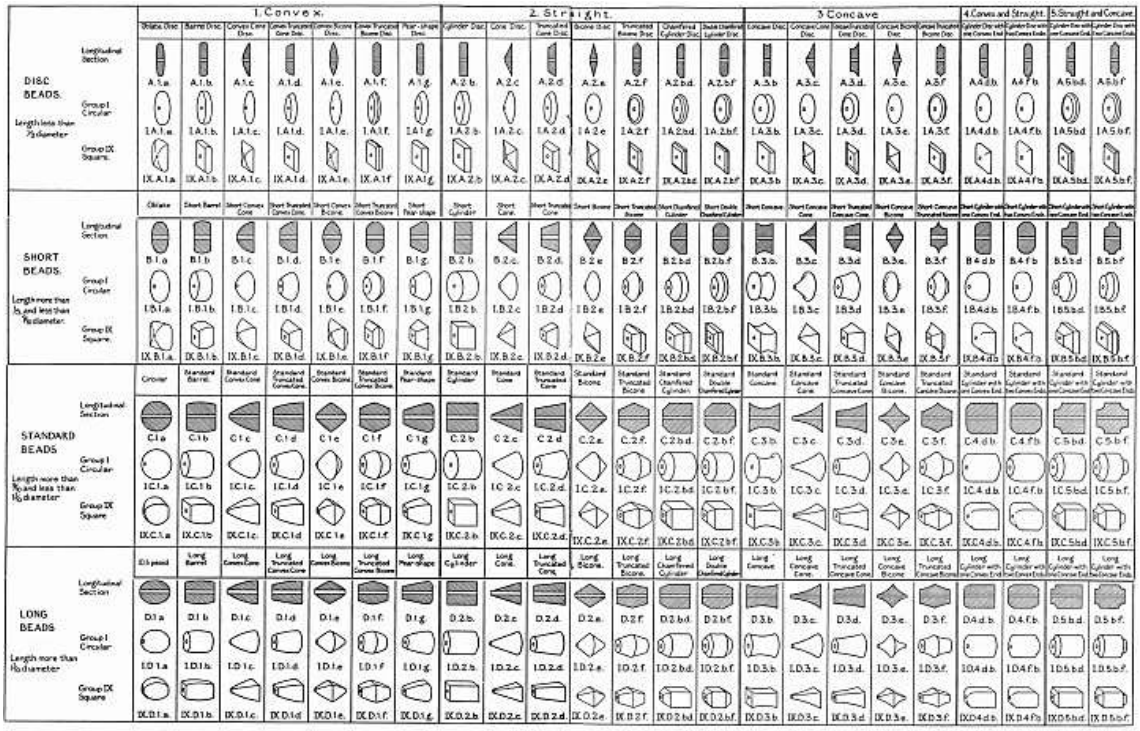


Chart 12-1Beck's bead claffisication

Primarily, beads can be divided in to two main categories as Circular beads and Hexagonal beads. In secondary classification sub groups were introduced as Convex and Straight. According to the features of longitudinal section, beads grouped as Oblate, Barrel, Cone, Bicone, Cylinder, Pear-shaped, Truncated and Chamfered in third categorizing stage. With regards of the length, four types can be recognized as Disc beads, Short beads, Standard beads and Long beads. Finally, a special category created as Annular, considering the diameter of perforation of the beads.

Acc. Length	Acc. Shape	Convex																Straight									Annular		
		Oblate			Barrel			Convex Cone			Truncated Convex Cone			Convex Bicone			Truncated Convex Bicone			Pear-shape			Cylinder			Truncated Bicone			Groove collar circular oblate					
Disc Beads	Circular																															
	Hexagonal																															
Short Beads	Circular																															
	Hexagonal																															
Standard Beads	Circular																															
	Hexagonal																															
Long Beads	Circular																															
	Hexagonal																															

Chart 12-2 Bead types found from kok-ebe , Andarawewa, Palippothana

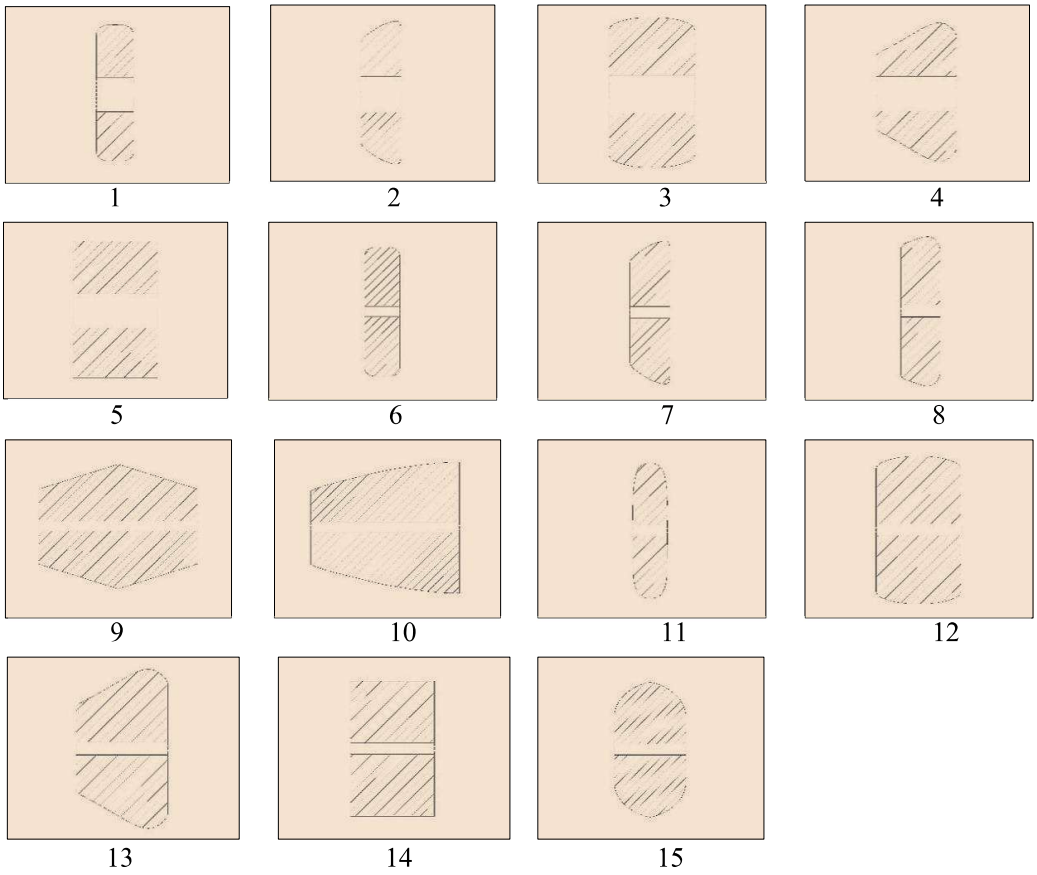
Kok-ebe : (8th century BC)

Andarawewa : (6th century BC)

Palippothana : (4th century BC)

Considering the shape of beads retrieved from Palippothana burial site, 15 types can be recognized as mentioned below.

1. Annular Barrel Circular Disc
2. Annular Convex Truncated Cone Disc
3. Annular Short Barrel Circular
4. Annular Short Circular Pear-shape
5. Annular Short Cylinder
6. Circular Barrel Disc
7. Circular Convex Truncated Cone Disc
8. Circular Pear-shape Disc
9. Long Hexagonal Truncated Bicone
10. Long Truncated Convex Cone
11. Oblate Disc
12. Short Barrel Circular
13. Short Circular Pear-shape
14. Short Cylinder
15. Short Truncated Convex Bicone



Plan 12-4 Cross-sections of bead types found from Palippothana

Recognized bead types of Kok-Ebe

1. Annular Barrel Circular Disc
2. Annular Truncated Bicone Disc
3. Circular Barrel Disc
4. Circular Pear-shape Disc
5. Convex Truncated Bicone Disc
6. Cylinder Disc
7. Long Truncated Bicone
8. Short Barrel Circular
9. Short Cylinder
10. Short oblate
11. Short Truncated Convex Bicone
12. Standard Barrel
13. Groove collar circular oblate

Recognized bead types of Andarawewa

1. Annular Short Circular Pear-shape
2. Circular Barrel Disc
3. Circular Pear-shape Disc
4. Convex Truncated Bicone Disc
5. Cylinder Disc
6. Short Barrel Circular
7. Short Circular Pear-shape
8. Short Cylinder
9. Short Truncated Convex Bicone

Chronological chart of the Beads of Kok-ebe, Andarawewa and Palippothana

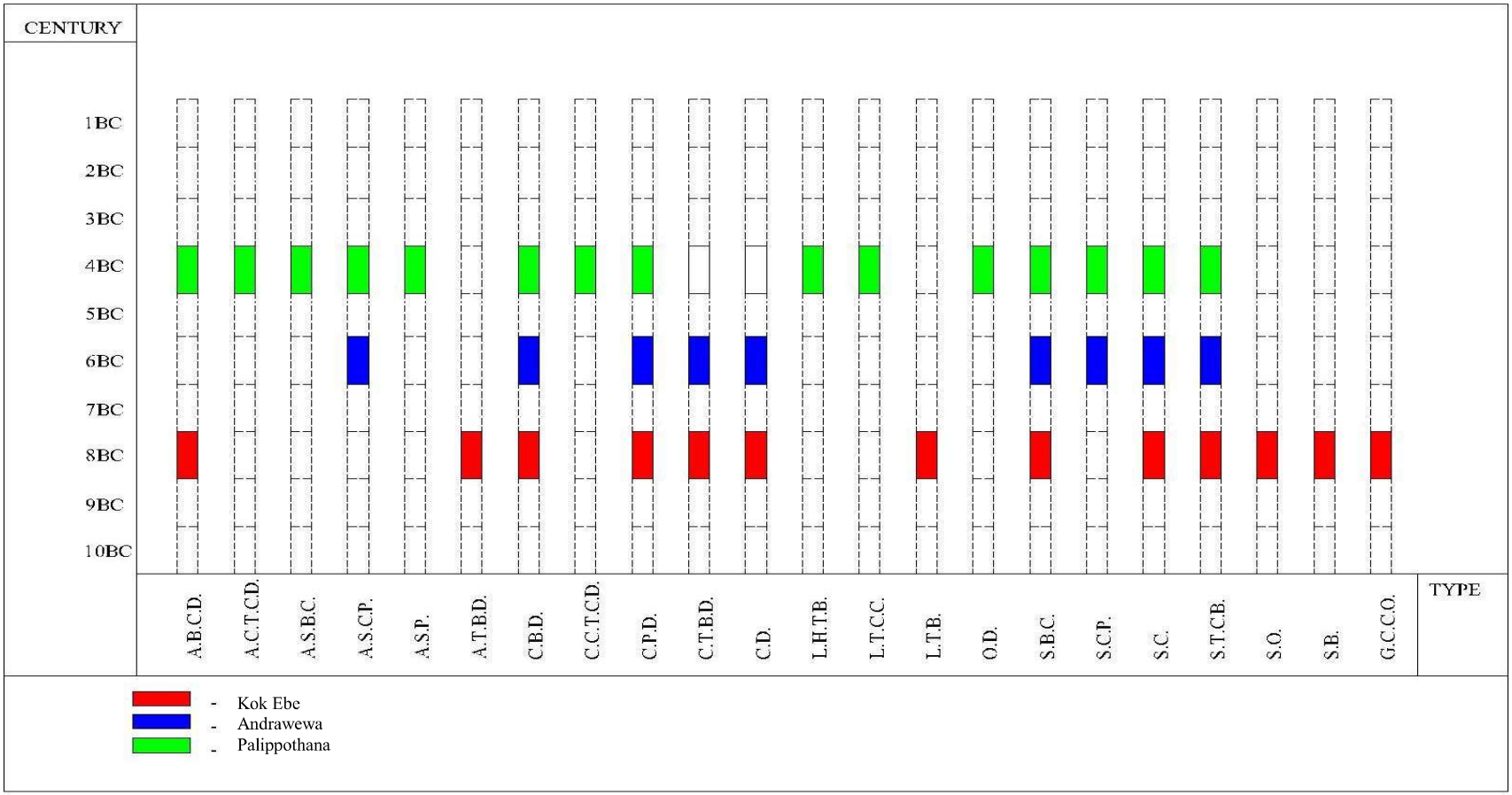


Chart 12-3 Chronological chart of the Beads of Kok-ebe, Andarawewa and Palippothana

Definitions

Circular: -	Beads in which the perimeter is a circle
Hexagonal: -	Beads in which the perimeter is a hexagon
Disc: -	Beads in which the length is less than one-third (<1/3) the diameter
Short: -	Beads in which the length is more than one-third and less than nine-tenths the diameter (1/3 < 9/10)
Standard: -	Beads in which the length is more than nine-tenths and less than one and one-tenth times the diameter (9/10 < 1 1/10)
Long: -	Beads in which the length is more than one and one-tenth times the diameter (> 1 1/10)
Oblate: -	Beads which the profile meets the perforation
Barrel: -	Beads with flat ends and that meet the curved profile at angle
Convex cone: -	Beads in which the curved profile meets the perforation at one apex
Truncated convex cone: -	Beads in which the curved profile does not meet the perforation and which therefore have two flat ends
Convex bicone: -	Beads in which the curved line of the profile meets the perforation
Truncated convex bicone: -	Beads in which the curved profile does not meet the perforation and which therefore have two flat ends
Pear-shape: -	Beads that have a convex profile of different curvature. Some pear-shape beads have a combination of straight and convex
Cylindrical: -	Beads in which the profile consists of one straight line parallel to the axis
Annular: -	Beads that have a perforation of more than half (½) diameter of the whole bead.

Bead Production

The common fact about beads for these three burials, is containing abundant of glass beads. The earliest evidence related to glass bead production in Anuradhapura was identified from the megalithic burial site in Kok-ebe as blue, green and brown glass beads, dated to 790

BC were retrieved from the excavation propagated in 2016 (Mendis,2017). Though, only brown beads found from Andarawewa burials dated to 6th Century BC, fragments of a furnace were recognized from the exploration done in the area. It is identified as a furnace used in glass production since it contains brown glass pieces. Also, similar features can be recognized in the furnace site of Giribawa and according to Lankton those furnaces were used to produce glass beads due to the presence of beads in peripheral area (Lankton,2014). Reference to these facts, it reveals that the glass beads found from Andarawewa share common aspects of beads retrieved from Giribawa (Mendis,2019).

Considering about the manufacturing procedure of beads, five main stages can be recognized as Procuring of the material, Shaping, Cutting, Polishing and Drilling. However, the order of stages can be different according to place and time. With regard of beads in megalithic burial site in Palippothana, most of them recorded as glass beads since they reflect the types and features of the productions of Andarawewa. According to Lankton, Giribawa samples were made from mineral soda glass with high alumina, variable potassium and lime, low cesium and low to moderate uranium (Lankton,2014). As stated by Indian researchers, silica has been used as a main raw material for glass bead productions and it was melt together with plant burnt ash in the manufacturing procedure. Various oxides had been used for the coloring purpose as iron oxides for blue, green and copper, lead, manganese oxides for red, brown, orange color beads (Mendis,2019). After the melting process, the paste tubes were made according to drawn technique and may be drilled with a metal rod for create the perforation. At the finale stage drilled paste tube was sliced for the formation of glass beads (ibid).

Among the collection of beads retrieved from Palippothana, all the beads in long hexagonal truncated bicone shape were made by clear quartz and these geometric creations bear the witness to the excellence of ancient technology. Clear quartz also known as Crystal quartz or Rock crystal is color less quartz and a natural form of silicon dioxide.The use of rocks and minerals in bead production can be commonly identified in Proto historic contexts and it reveals the local and foreign linkages and resource manipulation in contemporary period (Mendis,2016). Material evidence related to rock crystal, chert, amethyst, feldspar, garnet have been recorded from the Citadel of Anuradhapura, Ibbankatuwa, Pinwewa-Galsohonkanatta, etc. and it represents the expansion of resources from Central hills to Lowlands. During 900-400 BC it has been developed as a multifaceted relationship between

two zones and the peripheral region of Eastern Anuradhapura; the middle Yan-Oya basin was highly influenced (ibid).

Focusing on ancient quartz bead production in Sri Lanka, the research done by Peter Francis which related to Mantai, holds a great significance. According to Francis, stone beads manufactured in Mantai reflect the methods used in Indian bead industries. At first stage stone chunks were reduced by being chipped into crude shapes called roghouts and further refined by grinding or trembling. Then they were prepared for drilling and it proceeded from either one side or both. At Mantai polishing was done by tumbling, perhaps in a skin bag with other beads and slurry of agate dust agitated between two men for a fortnight, as was done in India late into the last century. Drilling was done with a bit on which two small diamonds were mounted (Francis,2013). However, in some areas in India, drilling was done right after simply polishing roughts as the highly polished bead can be damaged by complicated drilling process. Bow drill used as a drilling agent for stone beads which long in length since 4000 BC in India. It was a supportive method for avoid cracking and damaging (Ancient Bead.com,2021).The rock crystal beads found from Palippothana, could be produced in Sri Lanka as the main raw material can be effortlessly procure from the local context. And according to the retrieved evidence there was an accessibility to use metal as copper and iron in the production process.

Conclusion

The discovery of a huge amount of beads among the layers of proto-historic period reflect that the contemporary man in Sri Lanka was in a remarkable state of bead technology. Considering the above classification Annular Barrel Circular Disc, Annular Truncated Bicone Disc, Circular Barrel Disc, Circular Pear-shape Disc, Convex Truncated Bicone Disc, Cylinder Disc, Long Truncated Bicone, Short Barrel Circular, Short Cylinder, Short Truncated Convex Bicone, Short Oblate, Standard Barrel and Groove Collar Circular Oblate can be recognized as the earliest bead types. The types of Circular Barrel Disc, Circular Pear-shape Disc, Short Barrel Circular, Short Cylinder and Short Truncated Convex Bicone are common types retrieved from Kok-ebe, Andarawewa and Palippothana. They might be the in demand bead types in proto-historic era as they represent a continuous consumption trough years. Annular Truncated Bicone Disc, Long Truncated Bicone, Short oblate, Standard Barrel and Groove Collar Circular Oblate are only found from Kok-ebe and Annular Convex Truncated Cone Disc, Annular Short Barrel Circular, Annular Short Cylinder, Circular

Convex Truncated Cone Disc, Long Hexagonal Truncated Bicone, Long Truncated Convex Cone and Oblate Disc can be identified as limited types for Palippothana burial site. Except glass beads, it is special to find two steatite beads from Kok-ebe and several quartz beads from Palippothana. It portrays the prominent bead technology and the significance of long distance resource manipulation of Sri Lankan proto-history. Beads play a notable role in megalithic burial rituals as they yielded frequently from proto-historic sites. They might be used items of the dead ones or the gifts offered for their life after death.

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