

January 24, 2009

Kathy Tachibana
The Nature Conservancy Moloka'i Program
PO Box 220, Kualapu'u, Hawai'i 96757

RE: Letter Report Summarizing January 20, 2009 Archaeological Mapping Results, Pelekunu Valley, Ko'olau District, Island of Moloka'i

Dear Ms. Tachibana:

On January 20, 2009 I conducted a site visit to Pelekunu Valley, Ko'olau District, Moloka'i Island, Hawai'i to begin documentation of the irrigated agricultural systems, or *lo'i*, in the valley. A portion of one *lo'i* system was mapped. The system is located at the mouth of the valley on the west side of Pelekunu Stream (Figure 1). A total of 27 features were recorded, consisting of 25 terraces, a platform or pavement, and one *'auwai*, or drainage ditch (Figure 2). This encompassed only the northernmost portion of the system, with undocumented terraces continuing south, west, and east.

Archaeological features were recorded with a 1–3 m accurate Trimble Geo XM Global Positioning Systems (GPS) unit, although the accuracy of 30% of the corrected GPS points was greater than 5 m. Vegetation in the area consisted of guava and clidemia in most of the terraces, *hau* to the south, ginger to the east, and an open marsh on the west (Figure 3). Terraces in the marshy expanse were flooded, and water ran out through an opening on the north into a standing pond (Figures 4 and 5).

Wall construction varied significantly within the system, from simple alignments (Figure 6), to low walls of stacked stones (Figure 7), taller walls with larger stones and boulders (Figure 8), and a substantial double-faced wall on the east side of the mapped area (see Figure 2). A roughly square raised area with stone paving was also observed. This is depicted as Feature 8 in Figure 2.

A considerable amount of work is needed to fully document this *lo'i* system. The southern and western extent of the complex is unknown and the east side of the system likely extends to Pelekunu Stream. Many additional *lo'i* complexes occur inland of this system as well. Documenting the full extent of this complex and the others in the valley will help us to understand the scope and development of wetland agriculture in Pelekunu and the practices of the ancient farmers who worked these fields.

Thank you for the opportunity to begin this important work. Please feel free to contact me at (808) 352-0386 or mcelroy@hawaii.edu with any questions or concerns.

Mahalo,



Windy McElroy, PhD

Glossary

<i>‘auwai</i>	Ditch, often for irrigation.
clidemia	<i>Clidemia hirta</i> , also known as Koster’s curse, an introduced, invasive shrub.
ginger	The plant <i>Zingiber</i> , that produces fragrant flowers.
guava	The invasive tree or shrub <i>Psidium guajava</i> , which forms dense thickets in disturbed areas.
<i>hau</i>	The indigenous tree <i>Hibiscus tiliaceous</i> , which had many uses in traditional Hawai‘i. Sandals were fashioned from the bark and cordage was made from fibers. Wood was shaped into net floats, canoe booms, and various sports equipment and flowers were used medicinally.
<i>lo‘i</i>	Irrigated terrace for the cultivation of taro.

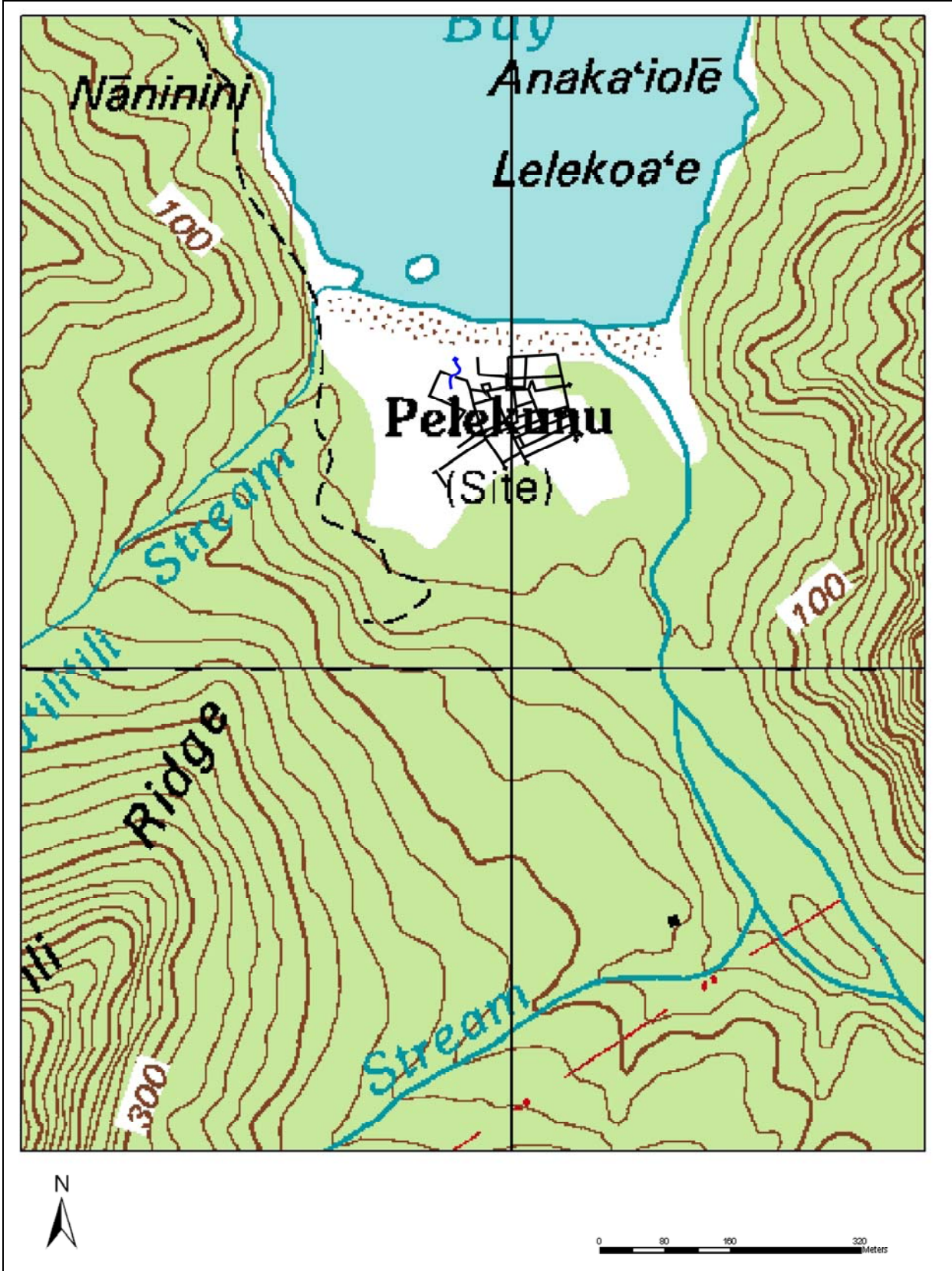


Figure 1. Lo'i system on a USGS topographic map of Pelekunu Valley.

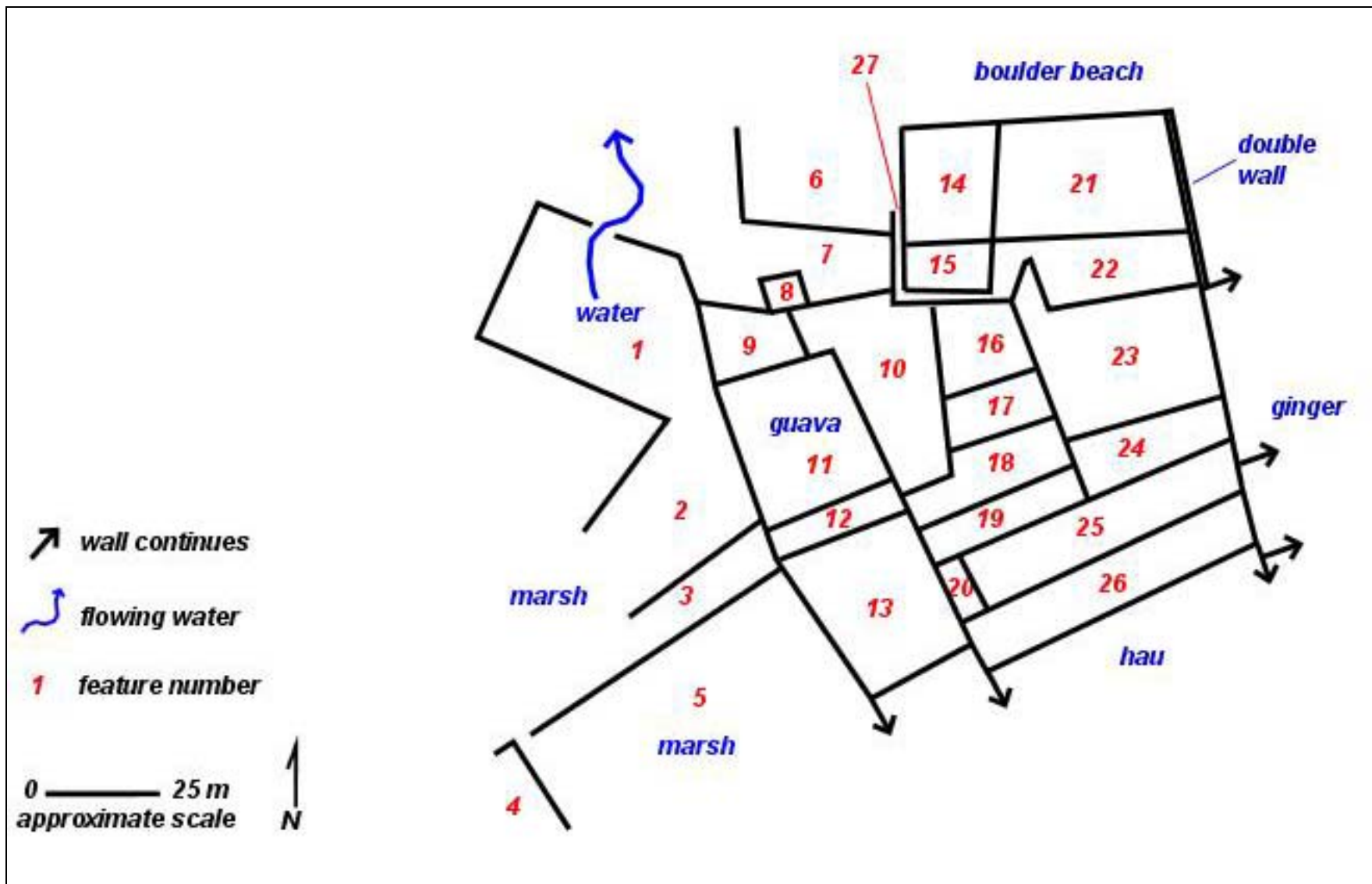


Figure 2. Plan view of the mapped portion of the *lo'i* system.



Figure 3. Open marsh of Feature 3. Orientation is to the east.



Figure 4. Outlet from Feature 1. Orientation is to the south. The scale is marked in 10 cm increments.



Figure 5. Standing pond on the north side of Feature 1. Orientation is to the northeast.



Figure 6. Feature 3, showing single-course wall ending abruptly in the marsh.



Figure 7. East wall of Feature 23. Orientation is to the east. The scale is marked in 10 cm increments.



Figure 8. South wall of Feature 23. Orientation is to the south. The scale is marked in 10 cm increments.