Supplemental Material 1: Airborne Laser Scanner and RGB camera system details.

| Laser Scanner: Riegl LMS-Q680i Full Waveform | RGB Camera: IGI Digicam H-39 |
|-----------------------------------------------|-------------------------------|
| Unfiltered Point-Density (per m²) | 16 | Array Size |
| Strip Overlap | 20% | 39 MP |
| Scan Angle (whole FOV) | 60° | Detector Pitch |
| Flying Height (AGL) | 511 m | 6.8 µm |
| Speed of Aircraft (TAS) | 110 knots | Image Size |
| Laser Pulse Rate | 400,000 Hz | 7216 × 5412 px |
| Measurement Rate (max) | 266,000 Hz | Focal Length |
| Scan Lines per Second | 169 | Ground Sample Distance |
| Laser Wavelength | 1550 nm (SWIR) | 8 cm |
| Strip Adjustment/Error | Yes, 0.0128 m (std. deviation) | Overlap (Side/Forward) |
| Filtering | Robust interpolation (OPALS) | 30/60% |
| Scan Angle (whole FOV) | 60° | Exposure Time (sec) |
| Flying Height (AGL) | 511 m | 1/750 |
| Speed of Aircraft (TAS) | 110 knots | Aperture |
| Laser Pulse Rate | 400,000 Hz | f/5 |
| Measurement Rate (max) | 266,000 Hz | Image Color Mode |
| Scan Lines per Second | 169 | RGB |
| Laser Wavelength | 1550 nm (SWIR) | |
| Strip Adjustment/Error | Yes, 0.0128 m (std. deviation) | |
| Filtering | Robust interpolation (OPALS) | |

M = meters, FOV = field of view, AGL = above ground level, TAS = true airspeed, max = maximum, Hz = Hertz, SWIR = short-wave infrared, MP = megapixels, µm = micrometer, px = pixel, mm = millimeter, cm = centimeter, sec = seconds.

Supplemental Material 2: Parameters for geophysical prospection equipment and survey.

| System | Type | Area Surveyed (ha) | Measuring Grid (m) | Resolution/ Frequency | No. Sensors/Antennas | Georeferencing |
|---------|------|-------------------|-------------------|-----------------------|----------------------|---------------|
| Förster Ferex | Fluxgate Magnetometer | 9 | 0.16 × 0.5 | 0.1 nT, 20 meas/sec. | 4 sensors | Post-processed GNSS |
| Sensors & Software | Ground Penetrating Radar | 2.5 | 0.05 × 0.25 | 500 MHz | 3 antennas | Post-processed GNSS |

Ha = hectares, m = meters, nT = nanotesla, GNSS = Global Navigation Satellite System

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### Supplemental Material 3: Principal prospection data sets and sources used in this study.

| Data Set          | Date       | Time of Year | Type          | Scale/Resolution | Products       | Use                        | Source/Provider                                      |
|-------------------|------------|--------------|---------------|------------------|----------------|----------------------------|-------------------------------------------------------|
| 3187-2, 3193-8,   | 1840–1877 | n.a.         | Cadastral Map | 1:400–1:5000     | Cadastral Data | Historic Land Use Information | Archivio di Stato di Trapani [http://www.archiviodistatotrapani.beniculturali.it/](http://www.archiviodistatotrapani.beniculturali.it/) |
| 3198-13, 3204-19, 3205-20, 3212-27, 3213-28, 3217-32, 3218-33, 3220-35, 3224-39, 3225-40, 3229-44, 3233-48, 3236-51, 3242-57, 3248-63, 3249-64, 3257-72, 3262-77, 3263-78, 3266-81, 3267-82, 3268-83, 3270-85, 3271-86, 3272-87, 3274-89, 3275-90, 3276-91, 3277-92, 3278-93, 3286-101, 3287-102, 3288-103, 3289-104, 3292-107, 3297-112, 3300-115, 3307-122 | 1896       | n.a.         | Topographic Map | 1:50000          | Cartographic Map Mosaic | Terrain Analysis, Toponym Study, Historic Land Use Information | Istituto Geografico Militare [https://www.igmi.org/](https://www.igmi.org/) |

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| Date       | Season | Image Type                          | Spatial Resolution | Feature Identification                  | Source                                      |
|------------|--------|-------------------------------------|--------------------|------------------------------------------|---------------------------------------------|
| 20 May 2003 | Spring | Oblique Color Digital Image         | 12 MP              | Orthomosaic                              | University of Vienna Aerial Archive         |
| 21 February 2016 | Winter | Vertical RGB Digital Image          | 8 cm spatial       | Orthomosaic                              | Airborne Technologies                       |
| 21 February 2016 | Winter | Geometric and Radiometric Data in Point Cloud Format | 16 pts per m²    | DEMs (DTM, DSM, filtered for archaeological interpretation), Reflectance Map | Airborne Technologies                       |
| 2106 ALS Survey | Winter | Geometric and Radiometric Data in Point Cloud Format | 16 pts per m²    | Terrain Analysis, Land Use Information, Archaeological and Paleoenvironmental Feature Identification | Airborne Technologies                       |
| April 2016  | Spring | Gridded Survey                      | 16 cm × 50 cm spatial | 50 cm Spatial Resolution Magnetogram     | ZAMG Archeo Prospections                   |
| April 2016  | Spring | Gridded Survey                      | 25 × 50 cm spatial | 50 cm Spatial Resolution Radargram Time Slices | ZAMG Archeo Prospections                   |
| 04–07 April 2016 | Spring | Intensive Linewalking Survey       | 2 m interpersonal distance, 100 × 100 m grid | Surface Artifact Distribution            | PA Prima Archeologia                        |
| Mazara del Vallo Geoportal WMS | Current | Cadastral Map                       | 1:5000             | Cadastral Data                           | Geoportale del Commune di Mazara del Vallo |

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| Regione Siciliana Geoportal WMS | 2007–2008 | unknown | DTM derived from ALS survey | 2 m spatial | DTM | Regional Topographic Data | Geoportale Regione Siciliana | http://www.sitr.regione.sicilia.it/geoportale |
|---------------------------------|-----------|---------|-----------------------------|-------------|-----|--------------------------|----------------------------|---------------------------------|
| National Geoportal WMS | 1988, 1994, 2000, 2006, 2012 | Various | B/W and Color Vertical Photography, Land Use Data | 1 m–50 cm spatial | Orthomosaic (VIA WMS) | Historic Land Use Information | Geoportale Nazionale | http://www.sitr.regione.sicilia.it/geoportale |
| Google Earth Pro | Spring–Fall | Vertical Color Imagery | 1 m–50 cm spatial | Orthomosaic (VIA WMS) | Historic Land Use Information | Google Earth | https://www.google.com/earth/ |

n.a. = not applicable, ALS = airborne laser scanning, hDEM = historic Digital Elevation Model, DSM = digital surface model, DTM = digital terrain model, MP = megapixel, cm = centimeter, m = meter, pts = points

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