Cycad Population Database Subgroup – Protocol for GPS Data Collection

Compiled by Mark Bonta based on suggestions from Talbot Brooks, Director, GIS Center, Delta State University (29 January 2005):

1. **GPS receivers should be set to the WGS-84 datum**. All GPS units contain this datum, and it is usually the default setting. However, in some countries users prefer other datums; we need to stick to WGS-84.
2. **GPS users should record the Geoid model that their receiver is using**, if that information is available. This should be submitted each time data are submitted.
3. **Each point should be taken 3 times, and the results averaged**. The mean of the three should be submitted as the 'truest' position. The user should walk 10 meters off the point, return to the point, and take the point again.
4. **5 GPS satellites should be available**. If 5 satellites are not available, wait until they are. Otherwise, accuracy will be greatly compromised. To plan ahead, check http://sirius.chinalake.navy.mil/satpred/ (Interactive GPS Satellite Prediction Utility) and plug in lat-long coordinates for your collecting trip to find out satellite availability.

These are the minimum enforceable standards that will guarantee that even the cheapest GPS units contribute to a global resolution of 10 meters horizontal accuracy and 30 meters vertical accuracy. Purported greater accuracy is unlikely for the majority of receivers, and is not a realistic goal.