Collecting of the Future

How technology will affect collecting Zingiberales by the year 2100

Colton Collins
Plant Group Hawai’i, Inc.
Overview

- Background
- Future Technologies
  - Interactive Satellite Maps
  - Internet Contact Lenses
  - Handheld DNA Sequencer
- Plant Group Hawai‘i, Inc.
Background
H. lawrenciana
'Red Velvet'
Alpinia malaccensis
‘Red Top’
Larsenianthus careyanus
'Cassi Collins'
H. pendaloides 'Perfect Darling'
THE NORTHERN MOST OF THAILAND
Technology of the Future

Interactive Satellite Maps

Internet Contact Lenses

Handheld DNA Sequencer

Present

Future

Identify using any plant part
Identify plant part properties
Map ecosystems
Interactive Satellite Maps

Store Data

Identify
Store Data

Present

- Past collection sites
- Ecological Niche Models
- Protected areas, International boundaries, etc.

Future

- Live GPS area tracking
- Buddy tracking
- Past collection areas
Store Data

Present

- Past collection sites
- Ecological Niche Models
- Protected areas, International boundaries, etc.

Future
Future

- Live GPS area tracking
- Buddy tracking
- Past collection areas
Identify

Present

Conifers - Oregon forest management

Future

Kaempferia elegans 'Mae Ping'

Google & Apple + military grade cameras
- view of objects four inches wide
Present

Conifers-Oregon forest management
Future

Kaempferia elegans 'Mae Ping'

Google & Apple + military grade cameras
= view of objects four inches wide
Benefits

Safety-knowing where you are

Efficiency-search in unexplored areas

Discoveries- focused searches
Platforms

Present

• Tablets

• Smart phones

Future

• Near future - Samsung tablet

• internet contact lenses/glasses
Internet Contact Lenses
Internet Contacts/Glasses

- Washington State University
- 1.2 millimeters in diameter
- Semitransparent display
Stream/Share Information

Present

- Project Glass
  - Go online
  - Stream data to your cloud

Weather Updates

- Share video/pictures
- Consult with colleagues
- Connect with loved ones

Future

- Voice commands
- Hand motion controls
- Bionic eye
Present

Project Glass
- Go online
- Stream data to your cloud

Weather Updates
- Share video/pictures
- Consult with colleagues
- Connect with loved ones
Future

- Voice commands
- Hand motion controls
- Bionic eye
Universal Translator

Present

- Word Lens by Quest Visual
- Written real-time instant translation
- Spanish, English, French, more

Future

- subtitles
- audio
- imperfect
Universal Translator

Present

- Word Lens by Quest Visual
- Written real-time instant translation
- Spanish, English, French, more

Future
Future

- subtitles
- audio
- imperfect
Plant Identification

Present

Leaf recognition software
- Photo of leaves
- List of possible species
- Additional plant info

Future

- 3D recognition
- Identify animals, insects, fungus
- Color recognition
- Software + satellites
  (x-ray vision)

Kaempferia sp.  'Peacock King'

Curcuma littoralis  'Pink Cloud'
Present

Leaf recognition software

- Photo of leaves
- List of possible species
- Additional plant info
Future

Kaempferia sp.
'Peacock King'
- Additional plant info

- 3D recognition
- Identify animals, insects, fungus
- Color recognition
- software + satellites
  (x-ray vision)

Curcuma lillicina
'Pink Cloud'
Benefits

Safety

- interactive satellite technology
- effective communication
- identify poisonous insects, snakes, etc.
- keep track of blood sugar levels, etc.
Efficiency
  • Less time identifying known species
  • Less communication errors

Increased Discovery Rates
  • Identify what is not recognized by the software
  • Amateur to Professionals

Alpinia sp. 'Mega Shell'
Handheld DNA Sequencer

Present

Future

- Identify using any plant part
- Identify chemical properties
- Pharmaceutics
Present

MinION by Oxford Nanopore
Future

- Identify using any plant part
- Identify chemical properties
- Pharmaceutics
Recap
Plant Group Hawai‘i, Inc.

Mission

“To collect, cultivate, and conserve plants from around the world and to inspire others to do the same.”

-Plant Group Hawai‘i, Inc.

Website

- User friendly
- New Services
- Se habla Español
- Online payments by card
- Plant Group Starr Mariposa

Facebook

- inspirational
- educational
- fun
Mission

"To collect, cultivate, and conserve plants from around the world and to inspire others to do the same."

-Plant Group Hawai‘i, Inc.

H. chartacea
'Sexy Scarlet'
Website

- User friendly
- New Services
  - Se habla Español
  - Online payments by card
- Plant Group Siam Mariposa

www.plantgrouphawaii.com
Facebook

- inspirational
- educational
- fun

http://www.facebook.com/PlantGroupHawaii
Questions?

Zingiber spectabilis