

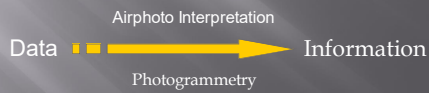
REMOTE SENSING

Topic 2: Elements of Airphoto Interpretation

Chapter 4: Lillesand and Keifer
Chapter 2: Avery and Berlin

Airphoto Interpretation

- Def'n
 - The extraction of information of all types from aerial photography



Airphoto Interpretation Activities

- A process that involves:
 1. Detection/Identification
 2. Measurement/Assessment
 3. Problem Solving/Results

Airphoto Interpretation

□ Ideally, the analyst will have:

- Experience
- Knowledge
- Familiarity
- Background

8 Key Diagnostic Characteristics

1. Tone or Hue
2. Size and Height
3. Shape
4. Texture
5. Pattern
6. Site
7. Association
8. Shadow

Adequate Resolution – prerequisite for identification

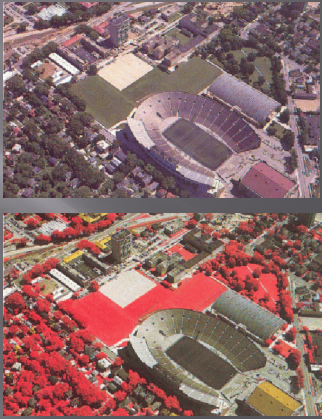
Tone or Hue

- Tone
 - Diagnostic
 - Discriminatory



Tone or Hue

- Hue
 - Diagnostic
 - Discriminatory



Size and Height

- Absolute and relative
- Fcn of scale
- Assessed from above, shadow height, and/or stereoscopically



Shape

- Form or configuration as viewed from above
- May be distorted
- Frequently key characteristic



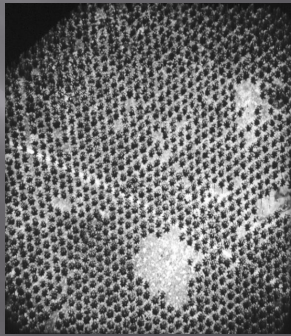
Texture

- ▣ Frequency of tonal change
- ▣ Described as course or fine
 - Function of scale
- ▣ Perceived even when the individual features are imperceptible



Pattern

- ▣ Arrangement of objects
- ▣ Pattern recognition is scale dependent
- ▣ Also evident even when features are unidentifiable



Site

- ▣ Topographic or geographic location
- ▣ Used to eliminate options



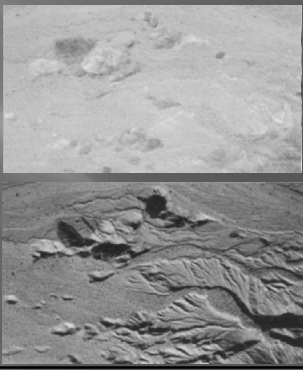
Association

- ▣ Location of features relative to other features
- ▣ Used when other diagnostic characteristics fail



Shadows

- ▣ Provide profile view from above
- ▣ Increases perception of topography
- ▣ Usually avoided



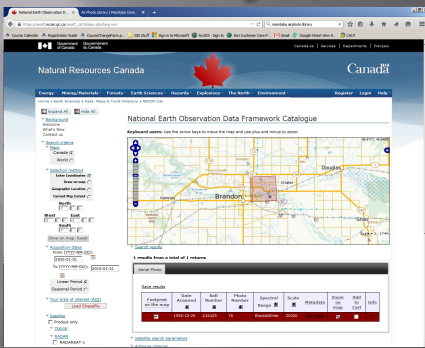
Interpretation Strategies

- ▣ The "Multi" approach
 - ▣ Spectral
 - ▣ Panchromatic and IR photos
 - ▣ Date
 - ▣ Fall and summer photos
 - ▣ Stage
 - ▣ Early and late growing season
 - ▣ Direction
 - ▣ Verticals and obliques
 - ▣ Disciplines
 - ▣ Pedologist and botanist

Interpretation Aids/Techniques

- ❑ Stereoscopic Viewing
- ❑ Ancillary Data
 - ❑ Maps
 - ❑ Other photos
 - ❑ Reports, etc.
- ❑ Interpretation Keys
 - ❑ Selection Keys
 - ❑ Elimination Keys
 - ❑ Dichotomous Keys
- ❑ Standard Classification Systems
 - ❑ Land Use/Cover Classifications
 - ❑ Vegetation Classifications

National Earth Observation Data Framework Catalogue (NAPL)



Manitoba Airphoto Library

