

## Understanding how People Work with Parts of Images in Scholarly Tasks

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### I. Purpose of this Research/Project

The purpose of this research is to understand how people work with parts of images in scholarly tasks. Specifically, we want to examine how parts of images and associated information are managed, retrieved, and used in fish species identification. Also, we want to get feedback on the use of SuperIDR in fish species identification. SuperIDR is an image-based digital library in which users mark parts of images and annotate those parts. Later, users may retrieve information through browsing and through searching by text- and content-based image retrieval.

We expect participants in this study to be those who have good knowledge of and who frequently engage in fish species identification (preferably, having taken a course in Ichthyology). We hope to recruit approximately 10 participants in this study.

### II. Procedures

The study will consist of 5 phases:

1. **Pre-study interview, tool setup, and training:** In a semi-structured interview (30 minutes), we will collect information about the participant's educational/work background, their knowledge of and current practices in species identification, and their use of computers in their work/study environment. Next, we will help set up SuperIDR on each participant's personal computer and provide a step-by-step tutorial of its features. A manual and video tutorial will be provided for later reference. At the end of the training, participants will be asked to complete a set of tasks to validate their training in using SuperIDR. This may include identifying 1-3 unknown specimens.
2. **Week 1 use and identifying unknown specimens:** Participants will be asked to use SuperIDR in their work/study environment for a week. They will be asked to complete an audio/text diary entry on every use. The entry is expected to be a 30-second audio message or a half-page write-up. At the end of the week, participants will be asked to identify 2-4 unknown specimens using the tool. We might upgrade the tool to a new version at the end of the week.
3. **Week 2 use and identifying unknown specimens:** This will be similar to what was done in week 1.
4. **Week 3 use:** This will be like week 2, except that the validation with 2-4 specimens won't be needed.
5. **Post-study interview:** In this semi-structured interview (60-90 minutes), we will elicit feedback on participants' use of parts of images and of SuperIDR in species identification. We will make use of diary entries, species ID data, and log data, as required. Where possible and permissible, we will record species identification practices of a participant in the form of notes, pictures, and photocopies. If possible

and permissible, we will video tape the participant's interaction with the SuperIDR interface.

### **III. Risks**

There are no more than minimal risks and discomforts to the participants in this study.

### **IV. Benefits**

We believe that there are multiple immediate and direct benefits to the participants in this study including: 1) exposure to advanced information management technology that may help in species identification and other scholarly tasks; 2) opportunity to develop skills in using annotation tools, digital libraries, and advanced image search (such as content-based image retrieval), which would be useful in their work/study environment; and 3) opportunity to revise and reinforce their knowledge about fish species.

The ultimate benefit of this study is that it will give insights into people's use parts of images in fish species identification and, possibly, other scholarly tasks. These insights will guide the design and improvement of software tools that enable working with parts of images, in order to support such scholarly tasks.

However, no promise or guarantee of benefits has been made to encourage participation. If, at a later date, a participant is interested in the results of the study, she/he may contact the researchers listed below for a summary.

### **V. Extent of Anonymity and Confidentiality**

All data collected will be anonymized. At the beginning of the study, each participant will be assigned a number, which will be used to label all data pertaining to that participant. Data collected per participant will include: 1) tool log data; 2) audio/written dairy entries; 3) audio recording of interview; 4) basic information questionnaire response; 5) species identification response; and 6) video recording of participants' interaction with the SuperIDR screen during interviews. No personal identifiable information (name, email ID, etc.) will be used. When audio/video recordings are done, they will be transcribed. These will be accessible only to the researchers listed below. At a later point, we will destroy the recordings themselves. When data is recorded in the form of pictures/videos, we will blur any identifiable information.

Unless the participant reveals information regarding abuse to him/herself and/or others, this confidentiality will be maintained under all circumstances.

### **VI. Compensation**

Each active participant will be compensated \$50 on completion of the study

### **VII. Freedom to Withdraw**


We encourage active and complete participation in the study. However, participants will be free to withdraw from a study at any time without penalty. If they choose to withdraw, their compensation will be prorated.

**VIII. Subject's Responsibilities**

I voluntarily agree to participate in this study and inform the researchers if I decide to discontinue participation in this study.

**IX. Subject's Permission**

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:



Subject signature

Should I have any pertinent questions about this research or its conduct, or research subjects' rights, or whom to contact in the event of a research-related injury to the subject, I may contact:

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