# An Introduction to iSCAM

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Installation
Source code
SVN commands
Directories
Text Editors
Compiling
Running Examples

# Outline

Installation
- Obtaining source code
- SVN commands
- Directories
- Text Editors

Compiling Source Code

Running Examples

# Obtaining iSCAM source code

Source code available at:
`http://code.google.com/p/iscam-project/`

Use subversion to checkout a copy

On Mac & Linux, in Terminal:

```
svn checkout http://iscam-project.googlecode.com/svn/trunk/ iscam-project-read-only
```

On Windows use a subversion client
`http://tortoisesvn.net/`

# Useful SVN commands

Usage: `svn command`

| Command | Description |
|---|---|
| `checkout` | Check out a working copy from a repository. |
| `info` | Display information about a local or remote item. |
| `update` | Bring changes from the repository into the working copy. |
| `log` | Show the log messages for a set of revision(s) and/or file(s). |
| `revert` | Restore pristine working copy file (undo most local edits). |
| `commit` | Send changes from your working copy to the repository. |
| `diff` | Display the differences between two revisions or paths. |
| `help` | Display help (usage `svn help <command>`) |

# Directory structure

- iSCAM-trunk
  - dist
  - docs
  - examples
  - fba
  - scripts
  - src

# Directory structure

- iSCAM-trunk
  - dist
    - debug
    - R
    - release
  - docs
  - examples
  - fba
  - scripts
  - src

dist contains the compiled ADMB code in debug and release versions, and the R scripts for dealing with output.

# Directory structure

- iSCAM-trunk
  - dist
  - docs
    - API
    - iSCAM-guide
    - userGuide
  - examples
  - fba
  - scripts
  - src

docs contains directories for the users guide, this presentation, and the API documentation for the source code.

The users guide and presentation is written in latex, and the API is built using doxygen.



Installation
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SVN commands
Directories
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Compiling
Running Examples

# Directory structure

- iSCAM-trunk
  - dist
  - docs
  - examples
    - 4VWXHerring
    - Cusk
    - ...
    - Makefile
    - makeproject
  - fba
  - scripts
  - src

examples directory contains several different examples and a Makefile for running the examples.

makeproject is a Unix script for setting up a new example directory.

# Directory structure

- iSCAM-trunk
  - dist
  - docs
  - examples
  - fba
    - BC-herring-2011
    - makeproject
    - ReadMe.txt
  - scripts
  - src

fba is a directory for "full blown assessment"

The ReadMe.txt file documents the various projects, and makeproject is a Unix script for setting up a new assessment directory.

# Directory structure

- iSCAM-trunk
  - dist
  - docs
  - examples
  - fba
  - scripts
    - scripts
  - src

scripts contains various scripts that are copied into assessment directories.

# Directory structure

- iSCAM-trunk
  - dist
  - docs
  - examples
  - fba
  - scripts
  - src
    - admb-code
    - r-code

src contains directories for the ADMB source code and the R-code and source files for the R-package.



Installation
Source code
SVN commands
Directories
Text Editors
Compiling
Running Examples

# Editors

Windows

- Textpad `http://www.textpad.com/`

Mac OSX

- Textmate `http://macromates.com/`

Linux

- Vim `http://www.vim.org/`

Cross platform

- Emacs `http://www.gnu.org/s/emacs/`
- eclipse `http://www.eclipse.org/`
- sublime `http://www.sublimetext.com/`

# Editors

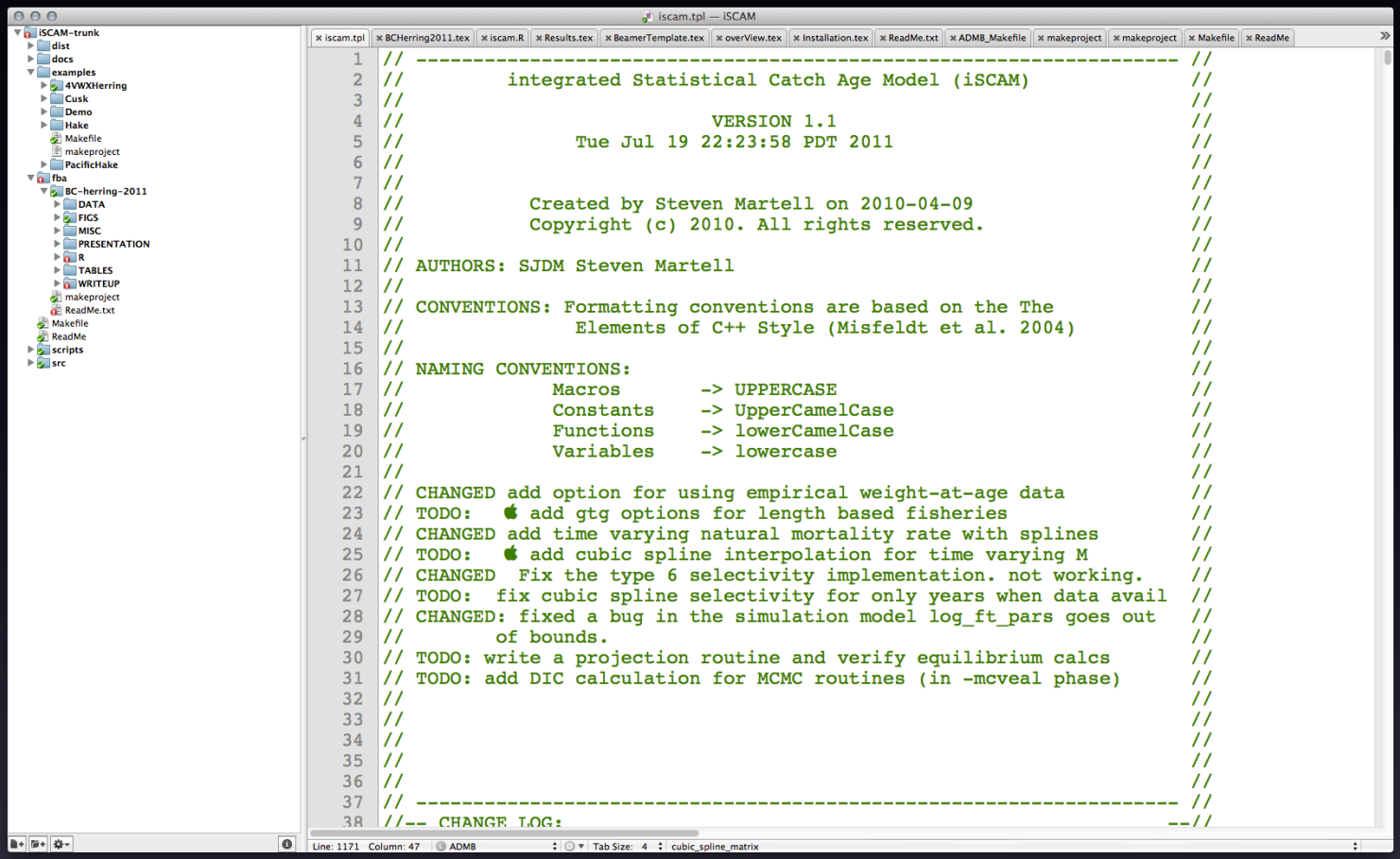


Figure: Textmate on Mac OSX

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# Compiling ADMB source code

What you need:

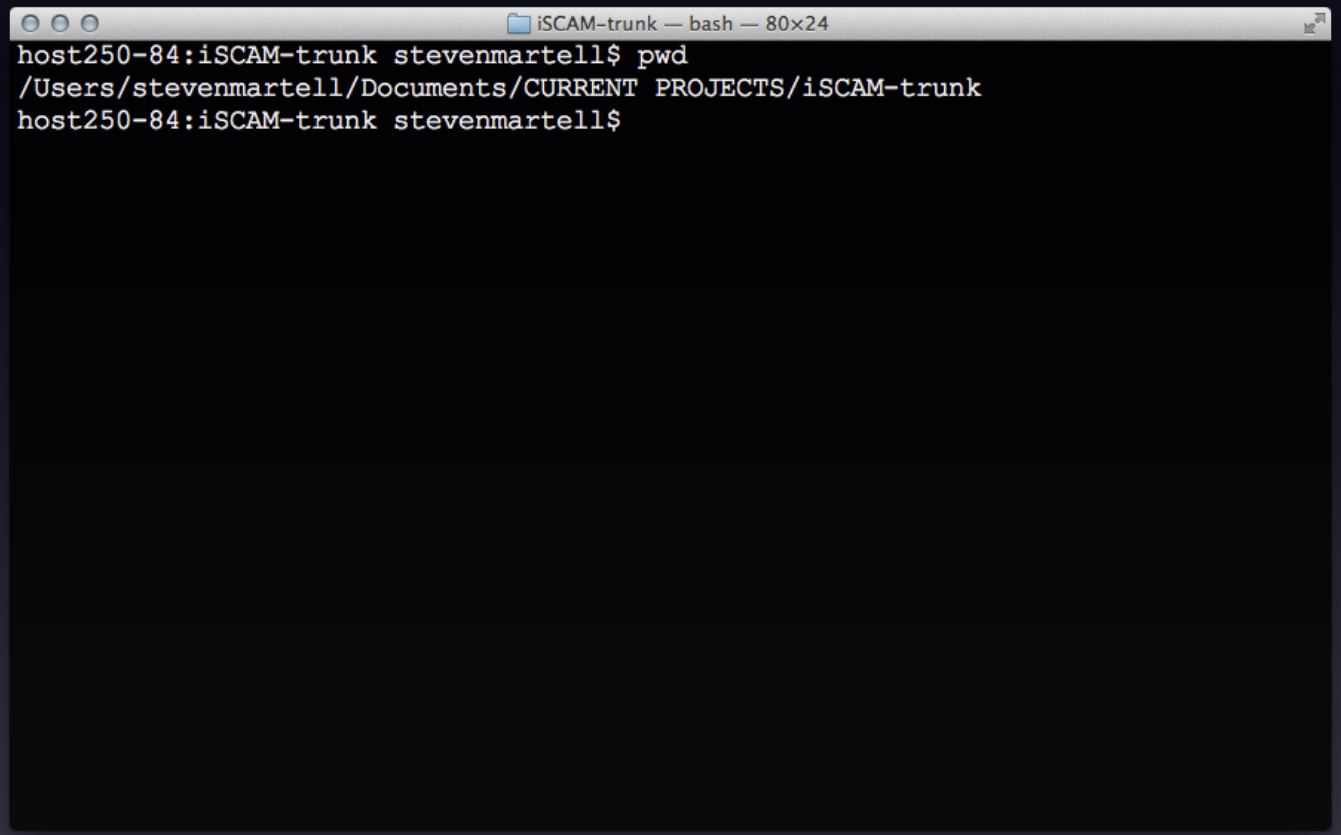
- C++ compiler (gcc recommended)
  - Mac OSX: install Xcode from appstore
  - Linux: `http://gcc.gnu.org/`
  - Windoze: `http://www.mingw.org/`
- ADMB libraries:
  `http://admb-project.org/downloads`

ADMB source code for iSCAM found in:
`./iSCAM-trunk/src/admb-code/`

# Compiling from the command line

At the command line:

- use cd to navigate to the ./iSCAM-trunk directory



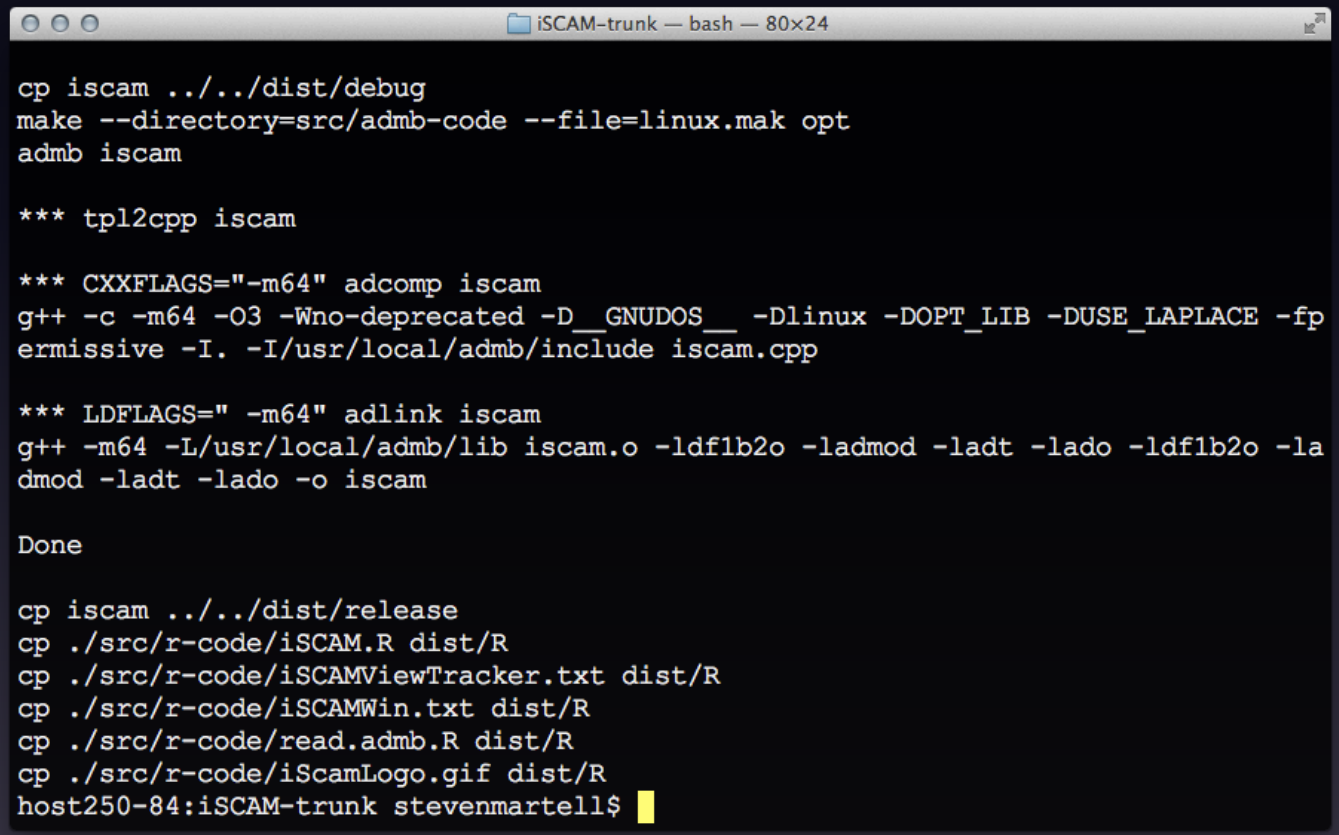



Installation
Source code
SVN commands
Directories
Text Editors
Compiling
Running Examples

# Compiling from the command line

At the command line:

- use cd to navigate to the ./iSCAM-trunk directory
- Linux or Mac OSX: type Make



# Compiling from the command line

At the command line:

- use cd to navigate to the ./iSCAM-trunk directory
- Linux or Mac OSX: type Make
- Windows: see `http://gnuwin32.sourceforge.net/packages/make.htm`

Using the make file will compile the iSCAM source code and place copies of the code in the distribution directory ("dist")

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# Running examples

Examples in `iSCAM-trunk/examples`

- `Demo`
- `Hake`