Tales of whales and herrings: comparing search functionality among web and subscription database searches

Marydee Ojala Editor-in-Chief, Online Searcher magazine

Marydee Ojala

- Editor-in-Chief, Online Searcher (infotoday.com/onlinesearcher)
- Director, WebSearch University (websearchu.com)
- Co-chair, Internet Librarian International (internet-librarian.com)
- @marydeeo

Marydee Ojala

- MLS, University of Pittsburgh
- Adjunct faculty, IUPUI (Indiana University Purdue University Indianapolis)





Why I got interested in this

- Business research class for graduate students in library school
- Students were asked to find headquarters address for local company – searched Google instead of subscription databases (and this was <u>after</u> they had listened to a full lecture about finding company information on subscription databases)

eCorporateOffices

Marsh Supermarkets Corporate Office | Headquarters

10679 North Michigan Road Zionsville, IN 46077 (317)598-3618

Company Information Get the most comprehensive company information available. Free Trial. www.hoovers.com/ The Wall Street Journal Official Site. Subscribe Today for Home Delivery & Get 4 Weeks Free! www.WallStreetJournal.com LLC in 3 Easy Steps (1) Sign Up (2) Fill in Online Form (3) Launch Your New Business Today! www.LegalZoom.com/LLC Corporate Rep Management Control Search Engine Listings. Free Reputation Assessment Today. www.reputationmanagers.com < > AdChoices ▷

Submit Complaints Here GetPayback.com

Have a Business / Company complaint Post your complaints here free

Answering Services AnswerNet.com/Answering-Service Get a quote on answering service. Serving all locations, 50+ centers.

Bra Sized Swimwear BareNecessities.com/Swimwear Shop New DD+ Swimwear Styles. Cup Sizes up to K. Become a Pharmacist 100% Online! Request Free Free Shipping Offer.

Womens D Cup Swimwear www.swimoutlet.com Free Shipping. Low Price Guarantee. The Web's Most Popular Swim Shop!

Reviews For Marsh Supermarkets Corporate Office

< >

AdChoices ▷ <

Employee Recognition Solutions With Analytics & Reporting. Learn More!

Wellness Incentive Plans www.CorporateRewards.com/Wel

Samsung Phone Systems www.Com-Unlimited.com High Quality Samsung Phone Systems Easy To Use With Multiple Features!

Become a Pharmacist www.Pharmacist.DegreeLeap.com Information Today.

Ask an Employment Lawyer JustAnswer.com/Law/Employe A Lawyer Will Answer You Now! A Question is Answered Every 9 Sec.

AdChoices >

Pat **** 9/13/11

Raced over a bit before 1pm to MARSH in Irvington on E. Washington on Nine/Eleven to pick up a fruit platter to take over to the local Fire House for the 1pm national recognition of our First Responders. Randy, the Produce Manager, went out of her way to expedite my fruit selection, make it very attractive, wrapped safely for movement, and got me out the door after purchase so as not to be late. She was a gem. I trust her Store Manager and Corporate will acknowledge her in some special way. She contributed very kindly to the 1pm experience for the Firefighters that day when the bells tolled and the sirens rang. Thank you, Randy. You are indeed special!

Why I got interested in this

- Research project: I searched Google and Bing. Bing put wiki (not wikipedia) in top 5 results. Google didn't know this
- Head to head articles we did in ONLINE (predecessor magazine to Online Searcher) always concluded you needed to search both the web and subscription files
- EconLit search for medical topic
 - Articles on melanoma (truncated) since 2000

Why I got interested in this

- Information literacy symposium at IUPUI with keynote speaker William Badke
- Bill Badke writes the InfoLit column for Online Searcher
- Librarian frustration both with students and faculty

Information professionals

- We buy subscription databases for our libraries
- We teach sophisticated search strategies
- We are adept at Boolean logic and field searching
- We know the difference between bibliographic databases and directory databases

We search

(((whale* OR cetacea*) NEAR5 (habitat OR "global warming" OR "climate change" OR (ocean NEAR 3 (heat* OR warm*))) NOT herring) AND date >=2010



Non-information professionals search

whales

Students

- Yes, they put one word in Google
- OK, if we're lucky, they also go to Google Scholar
- Or, they put enough words into Google so that it pulls up a few articles from Scholar
- If they've been told to, they also try subscription databases

INFORUM 2015

11

Whales - Google

Whale - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Whale - Wikipedia -

Whale is the common name for various marine mammals of the order Cetacea. The term whale sometimes refers to all cetaceans, but more often it excludes ... Blue whale - Sperm whale - Killer whale - List of cetaceans

In the news



SeaWorld sued for its treatment of killer whales

Fox News - 2 hours ago

SeaWorld is being accused of abusing its killer whales, or orcas, while raking in hundreds of ...

Gray Whale Smacks Surfer Who Gets Too Close to Baby NBC 7 San Diego - 20 hours ago

SeaWorld Lawsuit: "Shamu Show" Was A Sham That Masked "Ugly Truth" About Lives Of Whales At The Park
The Consumerist - 1 day ago

More news for whales

Whales - What is a Whale?- EnchantedLearning.com

www.enchantedlearning.com/subjects/whales/ -

Whales are large aquatic mammals that breathe air through blowhole(s) into lungs (unlike fish which breathe using gills). They live their entire lives in water.

Whales | Basic Facts About Whales | Defenders of Wildlife

www.defenders.org/whales/basic-facts ▼ Defenders of Wildlife ▼ Learn about the size, population, habitat, and diet of these playful whales.



Whale

Marine animal

Whale is the common name for various marine mammals of the order Cetacea. The term whale sometimes refers to all cetaceans, but more often it excludes dolphins and porpoises, which are smaller members of the suborder Odontoceti. Wikipedia

Representative species: Bowhead whale, Pilot whale, Killer whale, More

Feedback

Whales - Google

Whale | Species | WWF

https://www.worldwildlife.org/species/whale
World Wide Fund for Nature
At the top of the food chain, whales are vital to the health of the marine environment but
7 out of the 13 great whale species are endangered or vulnerable. Learn ...

Whales - NOAA Fisheries

www.nmfs.noaa.gov/pr/.../whales.htm ▼ National Marine Fisheries Service ▼ Whales are the largest animals that ever lived on the Earth. They are even larger than the dinosaurs of prehistoric times. All whales belong to a group known as ...

Blue Whales - National Geographic

video.nationalgeographic.com/.../whale_blu... ▼ National Geographic Society ▼ Blue whales have complex calls that can be heard for miles. One scientist is on a mission to uncover the meanings of their songs.

You're Eye-to-Eye With a Whale in the Ocean—What ...

www.theatlantic.com/technology/...whale.../274448/ - The Atlantic There is almost nothing about a whale's body that we can relate to. They breathe air like we do. They give birth to live young like we do. But the similarities seem to stop there.

Watching Whales Watching Us - NYTimes.com

www.nytimes.com/2009/07/12/.../12whales-t.html?... - The New York Times Editors' Note Appended. On the afternoon of Sept. 25, 2002, a group of marine biologists vacationing on Isla San José, in Baja California Sur, Mexico, came upon a couple of whales ...

Opinion: SeaWorld vs. the Whale That Killed Its Trainer

news.nationalgeographic.com/.../130803-bla... - National Geographic Society There have been dozens of attacks on trainers by orcas in marine parks around the world. These are not bad **whales**; they just come with all the instincts of predators, says the author.

WDC, Whale and Dolphin Conservation



us.whales.org/ ▼

A world where every whale and dolphin is safe and free.

The Whale Museum | Friday Harbor, Washington



whalemuseum.org/ ▼

The Whale Museum: promoting stewardship of whales and the Salish Sea ecosystem through education & research. In the Pacific Northwest of the United States ...

Searches related to whales

types of whales whales facts

whales video humpback whales

whales country blue whales

killer whales sperm whales



INFORUM 2015

14

Whales - Bing

Whale Facts and Information

www.whale-world.com -

Whale Species. There are two types of whales, baleen and toothed whales. The largest species are the baleen whales like the blue whale. Read More » Facts About Whales · Types of Whales · Whale Information · Humpback Whale

Whale - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Whale -

And God Created Great Whales, written in 1970 by American composer Alan Hovhaness, is a work for orchestra and whale songs, including the recorded sounds of

Taxonomy · Evolution · Anatomy · Life history and ... · Ecology · Species

Blue Whales, Blue Whale Pictures, Blue Whale Facts ...

animals.nationalgeographic.com/animals/mammals/blue-whale -

Learn all you wanted to know about blue **whales** with pictures, videos, photos, facts, and news from **National Geographic**.

Whales | Basic Facts About Whales | Defenders of Wildlife

www.defenders.org > ... > Fact Sheets > Whales *

Right whales like the North Atlantic right whale (Eubalaena glacialis) are among the rarest of all marine mammal species. These baleen whales have two separate ...

Videos of whales

bing.com/videos



See more videos of whales

Whales - What is a Whale? - EnchantedLearning.com



Whale

Whale is the common name for various marine mammals of the order Cetacea. The term whale sometimes refers to all cetaceans, but more often it excludes dolphins and porpoises, which are smaller members of the suborder Odontoceti. The other cetacean suborder, Mysticeti, comprises filter feeders who eat small organisms caught by straini... +

en.wikipedia.org

Gestation period: 365 days (North Atlantic right whale)

Length: 13 - 15 ft (North Atlantic right whale, Calve) · 43 - 52 ft on average (North Atlantic right whale) · 49 - 60 ft (+

Weight: 3,086 lb (North Atlantic right whale, Calve) · 88,185 - 154,323 lb on average (North Atlantic right whale) · 110,231 - 176,370 lb (+

Consists of: North Atlantic right whale · North Pacific right whale · Southern right whale

Belongs to: Cetacea

Listen to animal sounds

Humpback Whale "Song"

0:37

People also search for











See all (10+)

Whales - Bing

See more videos of whales

Whales - What is a Whale? - EnchantedLearning.com

www.enchantedlearning.com/subjects/whales •

Whales are large aquatic mammals that breathe air through blowhole(s) into lungs (unlike fish which breathe using gills). They live their entire lives in water.

Whale - WWF - Endangered Species Conservation | ...

www.worldwildlife.org > x Species ▼

Whales roam throughout all of the world's oceans, communicating with complex and mysterious sounds. Their sheer size amazes us: the blue whale can reach lengths of ...

Related searches for whales

Freddie Gray Whale Big Pictures of Whales

Types of Whales All Species of Whales
Pictures of Whales Facts About Whales

Whales: The Kids' Times - Office of Protected Resources ...

www.nmfs.noaa.gov/pr/education/whales.htm -

Whales. Whales are the largest animals that ever lived on the Earth. They are even larger than the dinosaurs of prehistoric times. All whales belong to a group known ...

[VIDEO] Video -- Blue Whales -- National Geographic

video.nationalgeographic.com/video/whale_bluecalls •

Blue **whales** have complex calls that can be heard for miles. One scientist is on a mission to uncover the meanings of their songs.

1 2 3 4 5

People also search for











See all (10+)

Dolphin

Killer whale

Sperm

Baleen whale

whale

Data from: Wikipedia · Freebase

Feedback

See results for

Whale and Dolphin Conservation Society

(WDC) Whale and Dolphin Conservation is a wildlife charity that is dedicated solely to the worldwide conser...



Blue whale

The blue whale is a marine mammal belonging to the baleen whales. At 30 metres in length and 190 tonnes or more in weight, it is the largest existing animal and th



Related searches

Freddie Gray Whale

Types of Whales

Pictures of Whales

Facts About Whales

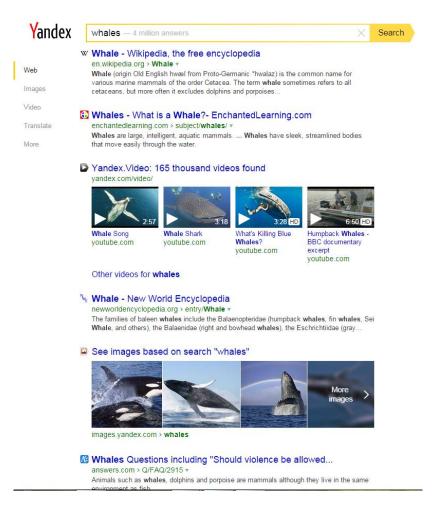
List of All Whales

All Species of Whales

Big Pictures of Whales

List of Whales with Pictures

Whales - Yandex



Whales - Google Scholar

Scholar My Citations About 241,000 results (0.04 sec) [CITATION] Sierra Club handbook of whales and dolphins Articles S Leatherwood, RR Reeves, L Foster - 1983 - agris.fao.org ... Would you like to helps us to get improved? Please fill in the survey! Whales and dolphins [1983]. ... Case law Cited by 557 Related articles All 3 versions Cite Save More My library citation. The natural history of whales & dolphins PGH Evans - 1987 - Facts on File Any time Cited by 379 Related articles Cite Save More Since 2015 Dehydration melting and the granulite transition in metapelites from southern Namaqualand, S. Since 2014 Since 2011 DJ Waters, CJ Whales - Contributions to Mineralogy and Petrology, 1984 - Springer Custom range... Abstract In a prograde amphibolite-granulite transition zone in the Namagualand Metamorphic Complex, metapelites show an interbanding of the amphibolite facies association biotite+ sillimanite+ quartz with the granulite facies association garnet+ ... Sort by relevance Cited by 89 Related articles All 3 versions Cite Save Sort by date The stock of whales NA Mackintosh - Nature, 1948 - nature.com ✓ include patents Abstract IN an article on the Effect of Present-day Whaling on the Stock of Whales 1, Dr. ✓ include citations Hamilton points out that in spite of a 'rest'during the War, the Antarctic catch of blue whales in 1945-46 showed a scarcity of the largest animals, a reduced proportion of this species (... Cited by 258 Related articles All 3 versions Cite Save More Create alert [CITATION] Cephalopoda in the diet of sperm whales of the southern hemisphere and their bearing on sperm whale biology MR Clarke - 1980 - University Press Cited by 343 Related articles Cite Save More Does acoustic testing strand whales? [PDF] from pelagosinstitute.gr A Frantzis - Nature, 1998 - nature.com Abstract Mass strandings of live whales have been explained by proposing many natural or human-related causes 1. I found that a recent stranding of Cuvier's beaked whale coincided closely in time and location with military tests of an acoustic system for submarine ... Cited by 318 Related articles All 21 versions. Cite. Save.

Herring

Herring - Wikipedia, the free encyclopedia



en.wikipedia.org/wiki/Herring - Wikipedia -

Herring are forage fish, mostly belonging to the family Clupeidae. They often move in large schools around fishing banks and near the coast. The most abundant ...

Herring as food



These oily fish also have a long history as an important food fish ...

Atlantic herring (Clupea harengus) is a herring in the family ...

More results from wikipedia.org »

Herring - Russ and Daughters



shop.russanddaughters.com/store/department/68/**Herring/** ▼ Products 1 - 9 - Herring. 3 Pickled Herring-Cream&Onions. Add to Basket. 3 Pickled Herring-Plain&Onions. Add to Basket. 3 Swedish Matjes. Add to Basket.

Red Herring — THE BUSINESS OF TECHNOLOGY



www.redherring.com/ ▼ Red Herring ▼

Red Herring provides an insider's access to the global innovation economy, featuring unparalleled insights on the emerging technologies driving the economy.

Herring Biology - What is a herring?



octopus.gma.org/herring/biology/what/default.asp •

There are several species of fish in the herring family. Typically, herring are small, streamlined, schooling "planktivores," or plankton-feeders. The nearly 200 true ...

NOAA - FishWatch: Atlantic Herring



www.fishwatch.gov/seafood_profiles/species/herring/.../atl_herring.htm ▼ Sep 26, 2014 - Atlantic herring is one of nearly 200 herring species in the family Clupeidae. Herring populations are naturally highly variable, possibly due to ...

Herrings - NYS Dept. of Environmental Conservation



www.dec.ny.gov... ▼ New York State Department of Environmental Conser... ▼



Herring

Herring are forage fish, mostly belonging to the family Clupeidae. They often move in large schools around fishing banks and near the coast. Wikipedia

Nutrition Facts

Herring, Atlantic, raw ▼

Amount Per 1 fillet (184 g) ▼

Calories 291

	% Daily Value*
Total Fat 17 g	26%
Saturated fat 3.8 g	19%
Polyunsaturated fat 3.9 g	
Monounsaturated fat 7 g	
Cholesterol 110 mg	36%
Sodium 166 mg	6%
Potassium 602 mg	17%
Total Carbohydrate 0 g	0%
Dietary fiber 0 g	0%

Herring - Bing

Herring - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Herring •

Herring are forage fish, mostly belonging to the family Clupeidae. They often move in large schools around fishing banks and near the coast. The most abundant and ...

Species · Characteristics · Life cycle · Ecology · Fisheries · As food

Herring as food - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Herring (food) -

Herring are very high in the long-chain Omega-3 fatty acids EPA and DHA They are a source of vitamin D. Water pollution influences the amount of **herring** that may be ... Nutrition and toxins · Preparation · Foods and dishes

Images of herring

bing.com/images



See more images of herring

Herring Biology - What is a herring?

www.gma.org/herring/biology/what/default.asp •

There are several species of fish in the herring family. Typically, herring are small, streamlined, schooling "planktivores," or plankton-feeders.

Herring | Definition of herring by Merriam-Webster

www.merriam-webster.com/dictionary/herring -

Full Definition of **HERRING** 1 : either of two food fishes (genus Clupeus); a : one (C. harengus) that is abundant in the temperate and colder parts of the North ...

See results for

Herring

Herring are forage fish, mostly belonging to the family Clupeidae. They often move in large schools around fishing banks and near the coast. The most abundant



Pickled herring

Pickled herring, also known as bismarck herring, is a delicacy in Europe, and has become a part of Baltic, Nordic, Dutch, German, Czech, Polish, Eastern Slavic, Scottish and Jewish cuisine.

Related searches

Pickled Herring

Salt Herring

Wolf Herring

Where to Buy Pickled Herring

Herring Health Benefits

Herring Funeral Home

Herring Bird

Pickled Herring in Wine Sauce

Related images







Red Herring

Pickled Herring

Herring Gull

And then what happens?

- They don't understand fields
- They don't understand thesaurus terms
- They don't know where to find thesaurus terms or why they should be interested in them
- They retrieve an abstract and feel cheated because there's no full text

The challenge

- Moving students (maybe even faculty) from one word in Google to other search venues
- Bing, DuckDuckGo, other web search engines
- Resource rich websites
- Subscription services paid for by library
 - Justify cost
 - Illustrate usefulness

Recognize

- You might be an information professional if
 - You actually enjoy the thrill of the chase
 - You do research for fun
 - You know advanced search techniques and use them on a regular basis
 - You think questions are as important as answers
- But not everybody wants to be an information professional
 - Finding more important than searching
 - Answers more important than question

Many different reasons to search

- Consumers
 - Target market for Google, Bing, etc.
- Students
 - Just enough info to write the paper, complete the assignment
- Faculty
 - Scholarly publishing
- Business people
 - Data-driven, Decision making

Why they search

- Determines where they search
 - And how they search
- Determines involvement of information professional
- May not align with search engine mission statements

In academia

- Students
 - Undergraduate needs versus graduate students
 - Don't understand research process
- Faculty
 - Research concerns are changing
 - Where to publish
 - Data mining
- Licensing negotiations

In corporate world

- Information professional must be adept at searching subscription databases
- Expect to be out-guessed by executives using Google
- Expand role of information professional

Types of searches

- Known item
 - I need to find this book or this journal article
 - I need a fact
 - Company name
- Citation
 - Who cited this article
- Open-ended research project
 - I'm writing a paper on
 - What research has been done on

Known items

- Book Amazon or WorldCat or library catalog?
- Journal article database or discovery service?
- Fact multiple sources

Known items

- Company name
 - If unambiguous, your results are perfect
 - Subaru
 - If ambiguous, your results can be suspect
 - Search Technologies
 - Is it company name or concept?
 - Results influenced by search history? By SEO?
- Auto suggest and auto complete can help

Citation searching

- Science citation index started this over 50 years ago
- Different citation counts between Web of Science and Google Scholar
 - This is well documented
 - Also documented that Scholar citations may be wrong
- But Scholar is getting better

INFORUM 2015

31

Open-ended research project

- Structured data versus unstructured data
- Terminology
 - Disambiguation
 - Confusion about thesaurus terms
 - Somewhat unnatural to normal people
 - And sometimes to info pros
- Human-generated thesauri terms versus algorithmically -generated terms

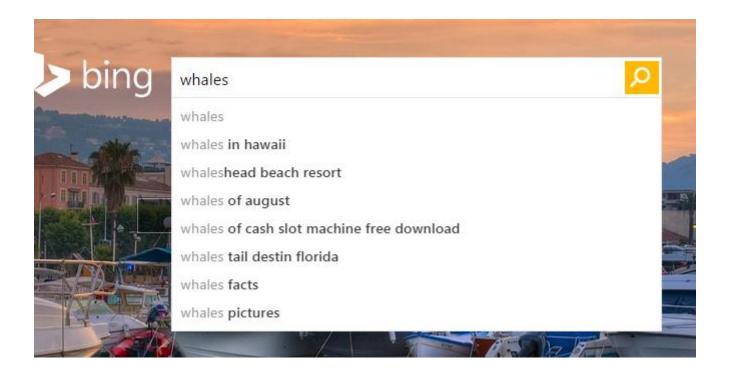
Comparing search results

Difficult task if you don't know intent of search

Tactics

- Redirection
- Yes and (instead of yes but)
- Pontificating and preaching don't work
- Let me amplify your knowledge (instead of I'm smarter than you are and a better searcher)
- Avoid the phrase "information literacy"

Auto suggest



Common mistakes

- Spelllllling
- Language
 - Wood or lumber or les or harampádí
- Thesaurus terms versus natural language
 - "Refuse collection vehicle" = garbage truck
 - "Animals, fossils" = fossils
- Misunderstanding fields
 - "Author" entered in author field
- Misunderstanding databases
 - Search for modern literature in EEBO

Machine learning

- Web search engines learn from search behaviors
- Marketing companies learn from search behaviors
- Voice search versus typing
 - Swollen ankle
 - Why is my ankle swolen
- Traditional databases take different approach to vocabulary
 - But do pay attention to user interface

Future

- Web search engines are going to get better
- Less incentive for students to search bibliographic databases
- More pressure on librarians
- Hard to convince students, faculty, businesspeople to give up dependence on Google

Contact details

- Marydee Ojala
- Editor-in-Chief, Online Searcher
- Infotoday.com/onlinesearcher
- marydee@xmission.com
- @marydeeo