

# Digital Language Resource Development

The COLRC 2.0



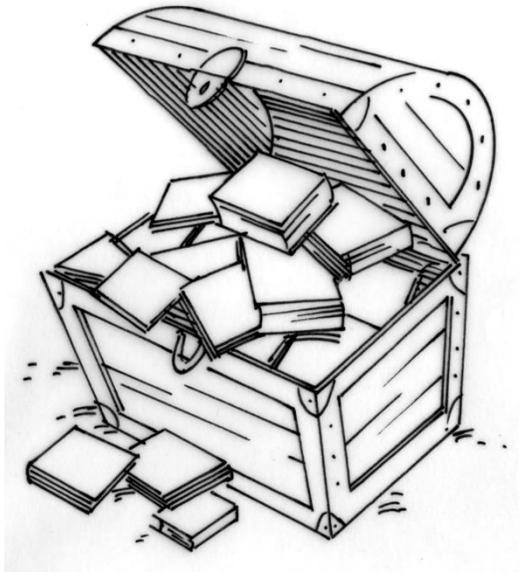
project supported by the national science foundation awards BCS-1160627 and BCS-1160394 and the national endowment for the humanities award PD-261031-18.

Amy Fountain, University of Arizona Dept of Linguistics

# Links

- Information and resources about digital language resource development: <https://tinyurl.com/colrcdigital>
- The current Coeur d'Alene Online Language Resource Center (COLRC 1.0): <https://tinyurl.com/colrc-current>
- The COLRC 2.0: coming soon ...

# 'Grass roots' digital resource development



Appropriate access to serve community needs;  
Safe storage in the digital sphere;  
Designed for the resources we have, and the communities we serve

# 'Grass roots' digital resource development

- As much as possible, use low and no-cost technical resources for development
- Focus on learnability and sustainability in choices about formats, technology, and infrastructure
- Done by volunteers, including students, who gain important experience along the way
- Small-scale, learn-as-we-go, 100% driven by specific community needs

# Contributors and Learners in Tucson



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Regents Professor and AILDI Director Ofelia Zepeda, AILDI Program Coordinator Alyce Sadongei and NAMA/PhD Student Wunetu Tarrant visiting Coeur d'Alene Language Programs in March 2019



HLT student Zhengnan Xie  
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HLT student Amaris Le Fay

# First, the purpose

Mission and goals, categories proposed by Chang 2010

- Designated Community
- Ongoing Relationship
- Access
- Preservation
- Infrastructure
- Financial Sustainability
- Disaster Preparedness
- Succession Plan
- Submission

# Then, the resources

- Identifying what's appropriate to include
- Digitizing what you already have (paper, audio, video)
  - Standards for digital resources are always changing
  - Always keep originals too
- Finding materials in existing archives (universities, libraries, museums)
- Making new resources that are 'born digital'

# Stuff that's needed

- Something for scanning paper files to create pdf or images
- A desktop or laptop computer that can run modern applications (Mac, PC or Linux)
- A high-speed internet connection
- (At least one technical expert who is willing to provide guidance)
- (Access to a server, or space in 'the cloud', or both)

# The Open Source Ethos – a Resource!

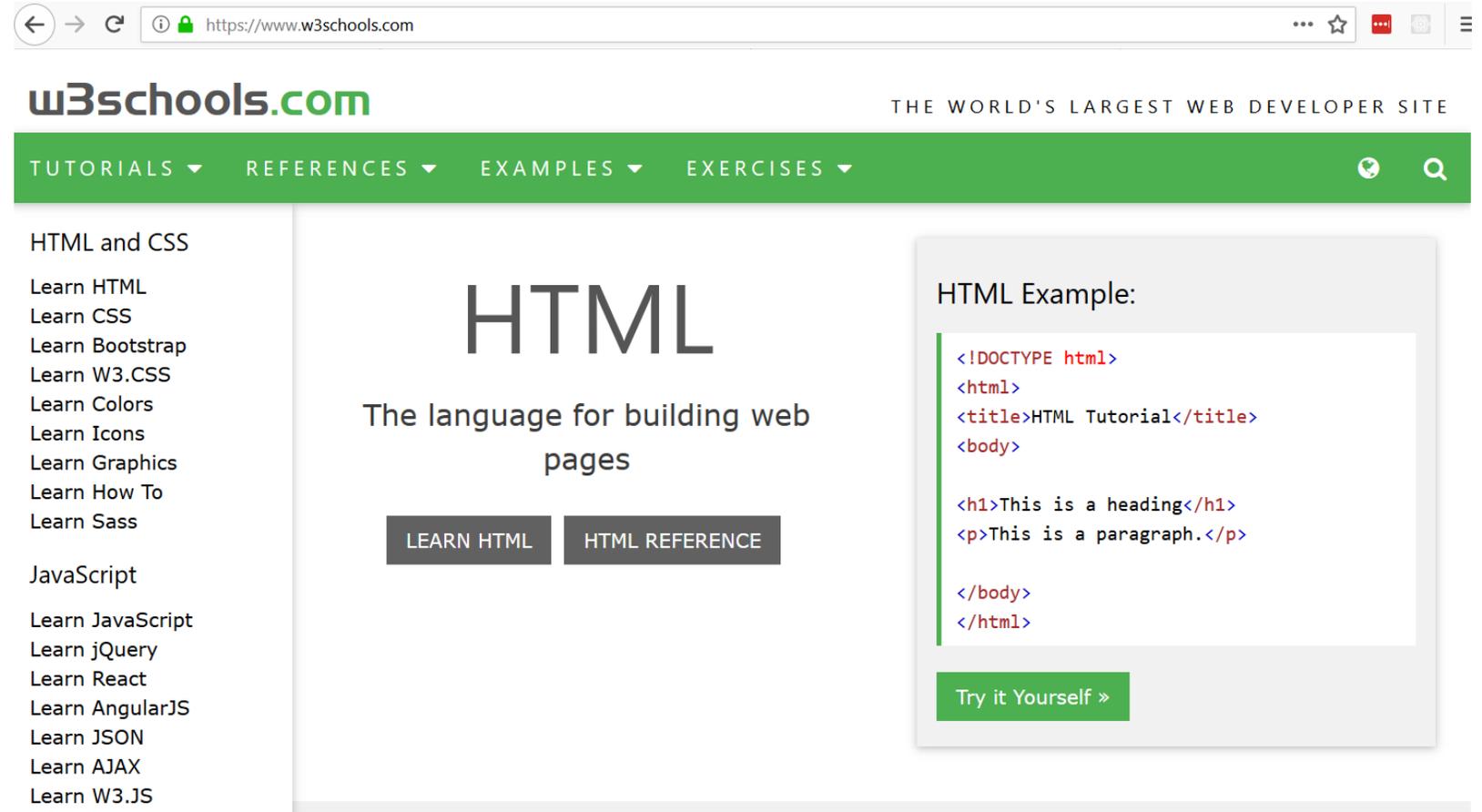
- ‘Open source’ means that people share the code that they create;
- And they share their experiences;
- And they are often quite willing to help;
- And they’ve also had that problem you’re having at this stage in development

# Step by Step

- Hypertext Markup Language (HTML) and a set of files – web pages that are mostly static...but you can have text, audio, images, video
- ...add a little Javascript and PHP to your HTML, and you can get things that are more dynamic
  - (CAOLR – [http://lasrv01.pfw.edu/crd\\_archive/start1.html](http://lasrv01.pfw.edu/crd_archive/start1.html))
  - (COLRC - <http://lasrv01.pfw.edu/COLRC/> )
- ...big step to a database 'MySQL', and something like 'node', 'react', 'graphql'

# Lots of free and low-cost courses

- W3Schools
- CodeAcademy
- KhanAcademy
- Coursera
- EdX
- ...



The screenshot shows the W3Schools website in a browser. The address bar displays "https://www.w3schools.com". The website header includes the logo "w3schools.com" and the tagline "THE WORLD'S LARGEST WEB DEVELOPER SITE". A green navigation bar contains the following menu items: TUTORIALS, REFERENCES, EXAMPLES, and EXERCISES. On the left side, there is a sidebar with a list of topics: HTML and CSS, JavaScript, and others. The main content area features the heading "HTML" and the subtitle "The language for building web pages". Below this, there are two buttons: "LEARN HTML" and "HTML REFERENCE". On the right side, there is a section titled "HTML Example:" which displays a code block with the following HTML code: 

```
<!DOCTYPE html>
<html>
<title>HTML Tutorial</title>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

 Below the code block, there is a green button labeled "Try it Yourself »".

# Coeur d'Alene Online Language Resource Center

## About the COLRC

original archive | mission statement | history of materials

in the archive

li 190 x 21

about

spelling and pronunciation guide

root dictionary

stem lists

affix list

texts

audio files

methodological notes

bibliography

advanced search

### About this site

This resource contains the **Coeur d'Alene** 1,400 roots and about 7690 "word" forms, roughly 200 affixes, and over 1,200 1927-1929 field notes and typed materials. Resources to help with **spelling and pronunciation**, vowel phonemes of Coeur d'Alene, a **corpus** used to write Coeur d'Alene (Nicodemus **working bibliography** is also included, a

The archive also links to **Ivy Doak's** grand'Alene material include the following: **Teit's Coeur d'Alene "tales"** which inclu

Inspector | Console | Debug | Style Editor | Performance | Memory | Network | Storage

Search HTML

```

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
  </head>
  <body>
    <div id="topMenu">
      <header id="topMenu_home">
      </header>
    </div>
    <div id="leftMenu">
      <aside id="leftMenu_about">
        <ul>
          <li>in the archive</li>
          <li></li>
          <li></li>
          <li></li>
          <li></li>
          <li></li>
          <li></li>
          <li></li>
          <li>methodological notes</li>
          <li></li>
          <li></li>
          <li>source files</li>
          <li></li>
        </ul>
      </aside>
    </div>
    <div id="container">
      <div id="main_top">
        <article id="main">
          <h3>About this site</h3>
          <p>
            This resource contains the
            <a href="/dictionary">Coeur d'Alene Root Dictionary</a>
            (
          </p>
        </article>
      </div>
    </div>
  </body>
</html>

```

html > body > div#container > div#main\_top > article#main > p

# The data = a 'delimited' text file

0::va::va::1::a::a::† hello. (gr.)

0::va::va::2::a::a?::so. (lit. Is that so?), (adv.)

0::va::va::3::a::aaaa...!::cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!), (imper.)

0::va::va::4::aye::aye::hey. (adv.)

1::vb::vbc::1::buc::buts::† boots. (n.)

1::vb::vbc::2::ec+búc+buc=šn::etsbutsbutssh::// boots (to be wearing...). ((lit. He is wearing boots), n.)

# The data = a 'delimited' text file

0::√a::√a::1::a::a::† hello. (gr.)

0::√a::√a::2::a::a?::so. (lit. Is that so?), (adv.)

0::√a::√a::  
out!, Knock

0::√a::√a::

1::√b::√bc

1::√b::√bc

wearing...).

Root	Salish	Nicodemus	
√a			
√a	1 a	a	† hello. (gr.)
	2 a	a?	so. (lit. Is that so?), (adv.)
	3 a·	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!), (imper.)
	4 aye	aye	hey. (adv.)

# COLRC Coeur d'Alene Online Language Resource Center

- Mission Statement: Introduction
- Designated Community
 

The primary target for resources within the COLRC is the Coeur d'Alene community. In addition, linguists and the wider scholarly community will find resources in the COLRC of interest.
- Ongoing Relationship
- Access
- Preservation
- Infrastructure
- Financial Sustainability

```

<html lang="en">
  <head>
  <body>
    <noscript>
      You need to enable JavaScript to run this app.
    </noscript>
    <div id="root">
      <div>
        <div>
          <div class="ui inverted top fixed menu">
          <div class="ui container" style="margin-top: 5em;">
            <div id="Banner" class="ui grid">
            <div class="ui container top aligned grid">
              <div class="row">
                <div class="column">
                  <div class="ui content">
                    <div class="ui mini menu">
                    <div class="ui content">
                      <div class="accordion ui fluid styled">
                        <div class="title">
                        <div class="content">
                        <div class="active title">
                        <div class="content active">
                          <p>
                            The primary target for resources within
                            the COLRC is the Coeur d'Alene community.
                            In addition, linguists and the wider
                            scholarly community will find resources
                            in the COLRC of interest.
                          </p>
                        </div>
                      </div>
                    <div class="title">

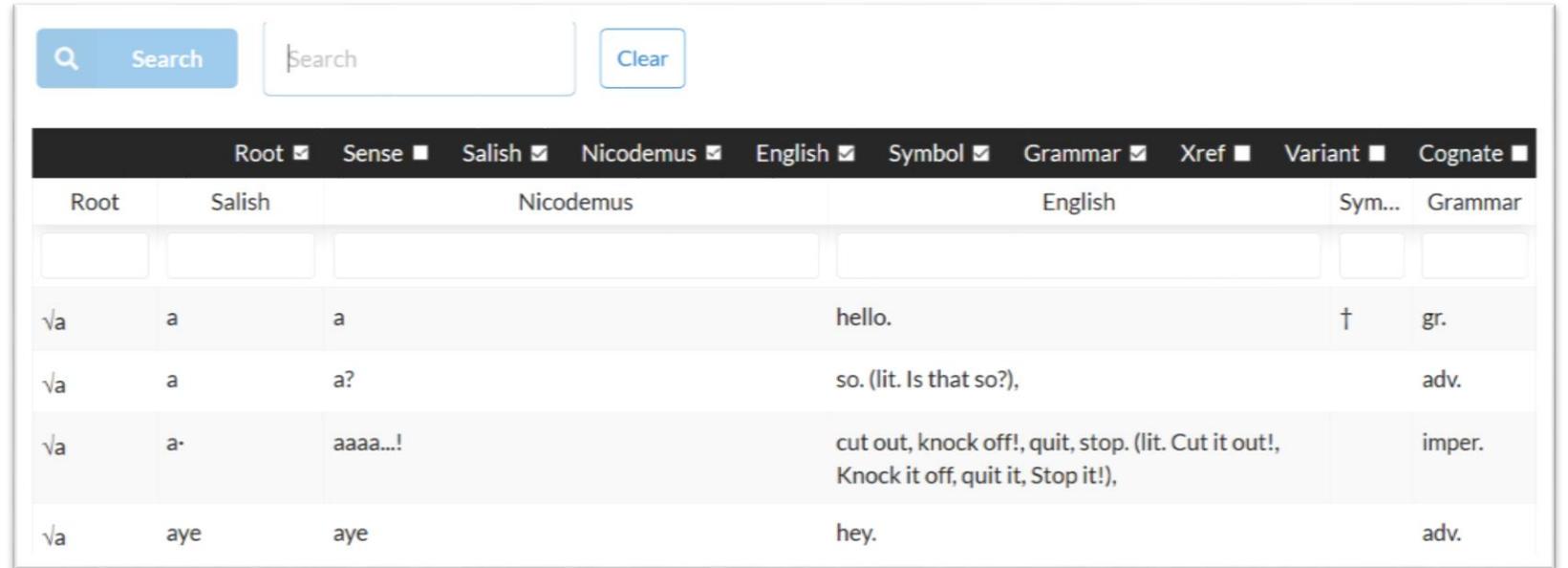
```

```
EXPLORER
src
  accordions
    AffixesAccordion.js
    AudioAccordion.js
    BibliographyAccordion.js
    ElicitationsAccordion.js
    HomeAccordion.js
    RootsAccordion.js
    SpellingAccordion.js
    StemsAccordion.js
    TextsAccordion.js
  affixes
  audio
  bibliography
  contact
  elicitations
  home
  more
  queries
  roots
    AddRoot.js
    EditRoot.js
    RootColumns.js
    Roots.js
    RootsDictionary.js
    RootsHistory.js
    RootsMetadata.js
  search
  settings
  spelling

HomeAccordion.js
1 import React, { Component } from 'react';
2 import { Link } from "react-router-dom";
3 import {
4   ...Accordion,
5   ...AccordionItem,
6   ...AccordionItemTitle,
7   ...AccordionItemBody,
8 } from 'react-accessible-accordion';
9
10 class HomeAccordion extends Component {
11   render() {
12     const homeIntro =
13       <Accordion>
14         <AccordionItem>
15           <AccordionItemTitle>
16             <div className="u-position-relative">
17               Site history
18               <div className="accordion__arrow" role="presentation" />
19             </div>
20           </AccordionItemTitle>
21           <AccordionItemBody>
22             <span>The original Coeur d'Alene archive was created by Shannon Bischoff and Musa Yassin Fort in the
                summer of 2009. The original website was created without any prior web design/building knowledge
```

# The data = a database record

```
{  
  "id": 0,  
  "root": "a",  
  "number": "1",  
  "nicodemus": "a",  
  "salish": "a",  
  "symbol": "†",  
  "english": "hello",  
  "grammar": "gr."  
},
```



The screenshot shows a search interface with a search bar containing the text 'a'. Below the search bar is a table with columns for Root, Salish, Nicodemus, English, Sym..., and Grammar. The table contains four rows of data corresponding to the JSON record shown on the left.

Root	Salish	Nicodemus	English	Sym...	Grammar
√a	a	a	hello.	†	gr.
√a	a	a?	so. (lit. Is that so?),		adv.
√a	a·	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!),		imper.
√a	aye	aye	hey.		adv.

# Digital **Language** Resource Development

- Most languages are/have been written using different alphabets ... for very good reasons.
- Each alphabet is useful for some purposes, but not for others.
- The COLRC has materials written in at least 3: 'Nicodemus', 'Salish', and 'Reichard'

# A moment with spelling...

localhost:3000/spelling 120%

Roots Stems Affixes Texts Audio Spelling Bibliography Contact Elicitations

Spelling and Pronouncing Coeur d'Alene

Nicodemus  Reichard  Salish  English  Note

List of Symbols

Nicodemus	Reichard	Salish	English	Note
<input type="text"/>				
a	a	a	father	
<u>a</u>	á	á	father	underlines or accents indicate the vowel is stressed
b	b	b	bat	
ch	tc	č	church	
ch'	tc'	č'	no example	
ts	ts	c	tsitsi fly	
ts'	ts'	c'	no example	
d	d	d	dog	
e	ä	ɛ, e	egg	

# A moment with spelling...

localhost:3000/spelling 120% ☆

Home Roots Stems Affixes Texts Audio Spelling Bibliography Contact Elicitations Search Profile

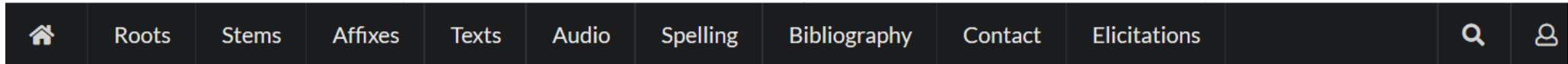
Spelling and Pronouncing Coeur d'Alene

Nicodemus  Reichard  Salish  English  Note

List of Symbols

Nicodemus	Reichard	Salish	English
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
'	'	ʔ	uh - oh
'(	R'	ʕ'	no example
'(w	r'w	ʕ'w	no example
'l	l'	l'	no example
'm	m'	m'	no example
'n	n'	n'	no example
'r	r'	r'	no example
'w	w'	w'	no example

# A choice for usability...let viewers decide



## Lyon and Green-Wood's Root Dictionary

Tap to launch virtual keyboard



Root	Nicodemus	English
<input type="text"/>	<input type="text"/>	<input type="text"/>
√a	a	hello.
√a	a?	so. (lit. Is that so?),
√a	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!),
√a	aye	hey.
√bc	butts	boots.
√bc	etsbuttsbutssh	boots (to be wearing...). (lit. He is wearing boots)

# Viewers can choose to see more...

Tap to launch virtual keyboard

<input checked="" type="checkbox"/> Root <input checked="" type="checkbox"/> Sense <input checked="" type="checkbox"/> Salish <input checked="" type="checkbox"/> Nicodemus <input checked="" type="checkbox"/> English <input checked="" type="checkbox"/> Symbol <input checked="" type="checkbox"/> Grammar <input checked="" type="checkbox"/> Xref <input checked="" type="checkbox"/> Variant <input checked="" type="checkbox"/> Cognate										
Root	Sense	Salish	Nicodemus	English	Sym...	Grammar	Xref	Var.	Cog...	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
√a	1	a	a	hello.	†	gr.				
√a	2	a	a?	so. (lit. Is that so?),		adv.				
√a	3	a·	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!),		imper.				
√a	4	aye	aye	hey.		adv.				
√bc	1	buc	buts	boots.	†	n.				
√bc	2	ec+búc+buc...	etsbutsbutsshn	boots (to be wearing...). (lit. He is wearing boots)	//	n.				

# Let's take a tour...

- In production COLRC1.0:  
<https://tinyurl.com/colrc-current>
- In development: localhost:3000



**COLRC** Coeur d'Alene Online Language Resource Center

- About
- Mission Statement
- History of Materials

This resource contains the [Coeur d'Alene Root Dictionary \(Lyon and Greene-Wood 2007\)](#) with nearly 1,400 roots and about 7690 "word" forms, Reichard's 1939 [Stem List](#) with some 1,300 stems, a list of roughly [200 affixes](#), and over 1,200 pages of Coeur d'Alene [texts](#) (copies of [Gladys Reichard's 1927-1929 field notes and typed manuscripts](#)) and English translations from [Reichard 1947](#). Resources to help with [spelling and pronunciation](#) of Coeur d'Alene include lists of the consonant and vowel phonemes of Coeur d'Alene, a comparison of the three different orthographies most commonly used to write Coeur d'Alene (Nicodemus, Reichard, and Salishan), and a guide to pronunciation. A [working bibliography](#) is also included. This bibliography continues to be updated as we identify additional resources.

- Site history
- Addition of resources
- Links to External resources

coeur d'alene online language resource center copyright 2009

project supported by the national science foundation awards BCS-1160627 and BCS-1160394 and the national endowment for the humanities award PD-261031-18.

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## Site history

The original Coeur d'Alene archive was created by Shannon Bischoff and Musa Yassin Fort in the summer of 2009. The original website was created without any prior web design/building knowledge using [w3schools.com](#) free tutorials over a period of six weeks. The site was constructed using simple html, javascript, and css code, all designed based on lessons at the site. The search mechanisms were a bit more complicated and required php, which can also be learned at the w3 schools website. A second version of the website is was developed in 2013 with the support of the National Science Foundation (award numbers BCS-1160394 and BCS-1160627), using these freely available, open-source, and easily learnable tools - expanded to include xml and ajax. You can find free tutorials for all of these tools at [w3schools.com](#). The current version of the site has been redeveloped beginning in 2019 with the support of the National Endowment for the Humanities award number PD-261031-18, using more specialized open-source tools that allow increased functionality and responsive design. The site is developed and maintained using [Node.js](#), [React](#), [GraphQL](#), and [mysql](#) (community edition). All of these tools are open source and available at no cost. You can find many excellent free tutorials on these tools at each resource homepage, and by searching online.

- Addition of resources
- Links to External resources

**COLRC** Coeur d'Alene Online Language Resource Center

- About
- Mission Statement**
- History of Materials

- ▶ Mission Statement: Introduction
- ▼ **Designated Community**

The primary target for resources within the COLRC is the Coeur d'Alene community. In addition, linguists and the wider scholarly community will find resources in the COLRC of interest.
- ▶ Ongoing Relationship
- ▶ Access
- ▶ Preservation
- ▶ Infrastructure
- ▶ Financial Sustainability
- ▶ Disaster Preparedness

COLRC Coeur d'Alene Online Language Resource Center

- Dictionary
- History
- Metadata
- Introduction
- Guide to Entries
- Guide to Symbols and Abbreviations

The 'virtual keyboard' can be launched to allow the users to type special characters, then copy/paste them into a filter or search box.

### Lyon and Green-Wood's Root Dictionary

Tap to launch virtual keyboard

A local search box looks in all the columns

Checkboxes show/hide columns

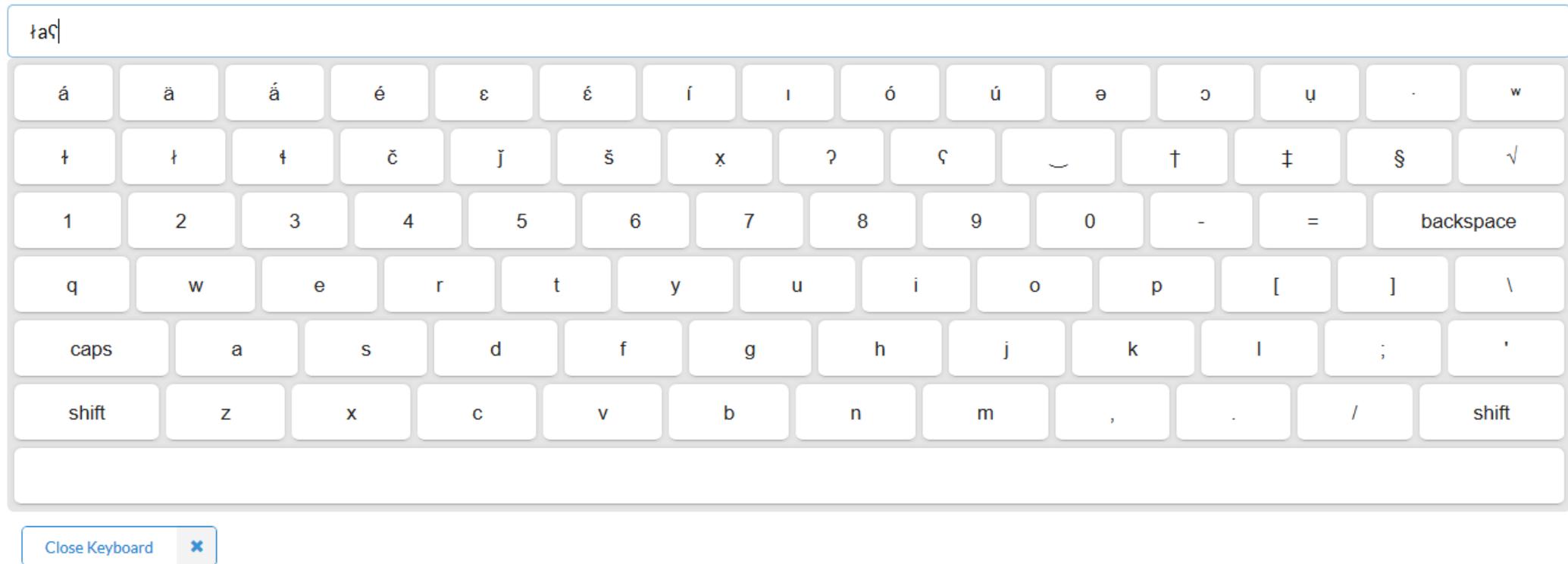
- Root
- Sense
- Salish
- Nicodemus
- English
- Symbol
- Grammar
- Xref
- Variant
- Cognate

Root	Nicodemus	English
√a	a	hello.
√a	a?	so. (lit. Is that so?),
√a	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!),
√a	aye	hey.
√bc	buts	boots.
√bc	etsbutsbutsshn	boots (to be wearing...). (lit. He is wearing boots)
√bc	sbutsbutsshn	boot. (lit. a borrowed root)

Users can type a search in one of the column filters to just look in that column

Columns are all sortable and resizable, and you can do multi-column sort.

This is what the virtual keyboard looks like now. But it's completely customizable. You can type in the characters, then copy/paste into anything you want.



The default view of the dictionary shows only root, Nicodemus and English. A user logged in as 'view', or not logged in, would see something like this.

- Introduction
- Guide to Entries
- Guide to Symbols and Abbreviations

Lyon and Green-Wood's Root Dictionary

Tap to launch virtual keyboard

Search Search Clear

Root	Nicodemus	English
√a	a	hello.
√a	a?	so. (lit. Is that so?),
√a	aaaa...!	cut out, knock off!, quit, stop. (lit. Cut it out!, Knock it off, quit it, Stop it!),
√a	aye	hey.
√bc	buts	boots.
√bc	etsbutsbutssh	boots (to be wearing...). (lit. He is wearing boots)
√bc	sbutsbutsssh	boot. (lit. a borrowed root)

COLRC Coeur d'Alene Online Language Resource Center

Dictionary History Metadata

If you are logged in with admin or updates privileges, you can add, edit or delete.

But nothing really gets deleted – instead, it gets an 'Active' flag of 'N'. An administrator can see and manage inactive roots.

- Introduction
- Guide to Entries
- Guide to Symbols and Abbreviations

'Edit' also preserves the original – it sets the original to 'inactive', and creates a new active record with the changes.

### Lyon and Green-Wood's Root Dictionary

+ Add a root

Tap to launch virtual keyboard

Search Search Clear

Root	Salish	Nicodemus	English	Sym...	Grammar	Active	User Name	Edit/Delete
√ckw <sup>1</sup>	t+cuk <sup>w</sup> +k <sup>w</sup> +...	ttsukukutm	attractive. (lit. capable of drawing something)		adj.	Y	original	
√ckw <sup>1</sup>	c+cuk <sup>w</sup> +m'ín...	ttsukw'mi'n'n	bob-sled. (lit. means of dragging, pulling)		n.	Y	original	
√ckw <sup>1</sup>	či+cen+cék <sup>w</sup> -n	chitsentsekwn	educe (lit. I drew it out (this way).	‡	vt.	Y	original	

This is the default view of stems.

COLRC Coeur d'Alene Online Language Resource Center

No local search box yet, but it's coming.

- Stem List Metadata
- The COLRC Stem List
- Organization

### Stem List

Tap to launch virtual keyboard

Stem categories used by Reichard: 'Other' = 'Adverbs, Interjections, Conjunctions'

Category <input checked="" type="checkbox"/> Reichard <input type="checkbox"/> Doak <input type="checkbox"/> Salish <input type="checkbox"/> Nicodemus <input checked="" type="checkbox"/> English <input checked="" type="checkbox"/> Note <input type="checkbox"/>		
Category	Nicodemus	English
Verbs		
verb	k'wi'	bite
verb	'l'laqh	lighten
verb	'l'lich	be thin slice
verb	'miw	cat meows
verb	'n'no'y-e'	weak (dim)
verb	'n-id	exchange, trade, pay for

**COLRC** Coeur d'Alene Online Language Resource Center

This is the default view of affixes.

No local search box yet, but it's coming.

Affix List Metadata

Introduction

### Affix List

Tap to launch virtual keyboard

Type  Salish  Nicodemus  English  Link

Type	Nicodemus	English	Link
Show All <input type="button" value="v"/>			
lexical prefix	'ye=	'horse, colt'	<a href="#">page 592 (380)</a>
lexical suffix	= 'qs	variant of =i?qs	<a href="#">variant</a>
lexical suffix	=a'lqs	'clothes'	<a href="#">page 611 (471)</a>
lexical suffix	=a'st	variant of =i?st	<a href="#">variant</a>
lexical suffix	=a'was-qn	'corner, angle, in hair, on top of head'	<a href="#">page 625 (550)</a>
lexical suffix	=a'wes	variant of =iw'es	<a href="#">variant</a>
lexical suffix	=almkhw	variant of =ilemxw	<a href="#">variant</a>
lexical suffix	=alp	'feeling'	<a href="#">page 612 (479)</a>
lexical suffix	=alpqw	'mouth inside, oral cavity'	<a href="#">page 616 (499)</a>

This is the default view of texts

COLRC Coeur d'Alene Online Language Resource Center

Texts Metadata

- Introduction ▾
- Guide to Presentation ▾

The triangles are expanders...

Tap to launch virtual keyboard

	Pub #	Notes #	Title	Narrator	Cycle
▶	1	1	Chief Child of the Root (Transformer)	Dorothy Nicodemus	Chief Child of the Root (Transformer)
▶	2	2	Origin of Indian Tribes (from Parts of Monster)	Dorothy Nicodemus or Tom Miyal (uncomfirm...	Coyote Cycle
▶	3	3	Coyote overpowers Sun	Dorothy Nicodemus	Coyote Cycle
▶	4	4	Coyote steals his daughter-in-law	Dorothy Nicodemus	Coyote Cycle
▶	5	6	Little Beaver	Dorothy Nicodemus	Coyote Cycle
▶	6	7	Coyote devours his own Children	Dorothy Nicodemus	Coyote Cycle
▶	7	8	Coyote loses his Eyes (Eye Juggling)	Dorothy Nicodemus or Tom Miyal (unconfirme...	Coyote Cycle
▶	8	19	Coyote hunts with Crane and releases Salmon	Dorothy Nicodemus or Tom Miyal (unconfirme...	Coyote Cycle
▶	9	20	Story of Lynx	Tom Miyal	Coyote Cycle
▶	9	21	Story of Lynx	Dorothy Nicodemus	Coyote Cycle

Texts Metadata

- Introduction
- Guide to Presentation

Texts

Tap to launch virtual keyboard

	Pub #	Notes #	Title	Narrator	Cycle
			littl		
▶	5	6	Little Beaver	Dorothy Nicodemus	Coyote Cycle
▼	28	30	Little Mosquito	Dorothy Nicodemus	Myths not in the Coyote cycle

Versions

- Dual view of typed and handwritten notes
- English Translation pdf
- English Translation image files
- Handwritten Fieldnotes pdf
- Handwritten Fieldnotes image files
- Typed Manuscript pdf
- Typed Manuscript image files
- Little Mosquito Part 1 - in Coeur d'Alene, spoken by Lawrence Nicodemus (unconfirmed)
  - ▶ 0:00 / 0:00 🔊
- Little Mosquito Part 2 - in Coeur d'Alene, spoken by Lawrence Nicodemus (unconfirmed)
  - ▶ 0:00 / 0:00 🔊

Expand a text to see all the versions, including any audio we have. This should make it easier for folks to listen to the audio and read the manuscript



Audio List Metadata

Introduction

Audios

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Title	Speaker	Audio
Cricket Rides Coyote - in Coeur d'Alene	Lawrence Nicodemus	
Cricket Rides Coyote - in English	Lawrence Nicodemus	
Little Mosquito Part 1 - in Coeur d'Alene	Lawrence Nicodemus (unconfirmed)	
Little Mosquito Part 2 - in Coeur d'Alene	Lawrence Nicodemus (unconfirmed)	
Rabbit and Jackrabbit Part 1 - in Coeur d'Alene	Lawrence Nicodemus	
Rabbit and Jackrabbit Part 2 - begins in Coeur d'Alene, ends in English	Lawrence Nicodemus	
When Deer Kills Children - song, in Coeur d'Alene	Unconfirmed	
Lord's Prayer, Angel's Salutation - in Coeur d'Alene	Unconfirmed	

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## Elicitations

The Nicodemus - Sloat Word List Elicitations ▼

Item	Audio	Transcription
He is clubbing him on the neck	He is clubbing him on the neck, spoken by Lawrence Nicodemus 	'itsanqhttsinms
He is being clubbed on the neck	He is being clubbed on the neck, spoken by Lawrence Nicodemus 	
I am clubbing him on the neck	I am clubbing him on the neck, spoken by Lawrence Nicodemus 	hi'tsanqhttsinm
I am being clubbed on the neck	I am being clubbed on the neck, spoken by Lawrence Nicodemus 	chi'tsanqhttsinm
You are being clubbed on the neck	You are being clubbed on the neck, spoken by Lawrence Nicodemus 	ku'ytsanqhttsinm

## Spelling and Pronunciation Guide

- Introduction
- Pronunciation of Coeur d'Alene sounds

## Spelling and Pronunciation

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Spelling and Pronouncing Coeur d'Alene

Nicodemus <input checked="" type="checkbox"/> Reichard <input checked="" type="checkbox"/> Salish <input checked="" type="checkbox"/> English <input checked="" type="checkbox"/> Note <input type="checkbox"/>			
List of Symbols			
Nicodemus	Reichard	Salish	English
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
a	a	a	father
<u>a</u>	á	á	father
b	b	b	bat
ch	tc	č	church
ch'	tc'	č'	no example
ts	ts	c	tsitsi fly
ts'	ts'	c'	no example
d	d	d	dog
e	ä	ɛ, e	egg
<u>e</u>	á	é, é	egg
no form	E, I, U	ə	sofa
gw	gw	g <sup>w</sup>	linguini

List of Symbols Phoneme Charts

There's a 'phoneme chart' display, by default it just shows the Nicodemus symbols

### Spelling and Pronunciation Guide

- Introduction
- Pronunciation of Coeur d'Alene sounds
- Understanding the Consonant Chart

Consonants									
ortho-graphy	labial	alveolar	alveo-palatal	lateral	palatal	velar	uvular	pharyn-geal	glottal
Nicod									
Nicodemus	p	t					q		'
Nicodemus	p'	t'					q'		
Nicodemus						kw	qw		
Nicodemus						k'w	q'w		
Nicodemus			ts		ch				
Nicodemus			ts'		ch'				
Nicodemus	b	d							
Nicodemus						gw			
Nicodemus					j				
Nicodemus		s		ʃ	sh		qh		h

## Bibliography Information

## Bibliography List

Tap to launch virtual keyboard

Author  Year  Title  Reference 

Author	Year	Title	Reference
Barthmaier, Paul T.	1996	<a href="#">A Dictionary of Coeur d'Alene Salish from Gladys Reichard's file slips</a>	University of Montana M.A. Thesis.
Bischoff, Shannon T.	2011	Lexical affixes, incorporation, and conflation: The case of Coeur d'Alene	Studia Linguistica 65.1:1-32.
Bischoff, Shannon T.	2011	Formal notes on Coeur d'Alene clause structure	Newcastle: Cambridge Scholars Press.
Bischoff, Shannon T.	2007	Functional Forms-Formal Functions: An account of Coeur d'Alene clause structure	PhD dissertation University of Arizona.
Bischoff, Shannon T.	2006	Basic clause structure in Coeur d'Alene A preliminary working paper	In MIT Working Papers on Endangered and Less Familiar Languages Volume on Salish, (eds) Shannon T. Bischoff, Lynnika Buttler, Peter Norquist, and Daniel Siddiqi. Cambridge MIT Press.
Bischoff, Shannon T.	2006	The left periphery in Coeur d'Alene Evidence from the Reichard Manuscripts	In Proceedings of WSCLA 10 UBCWPL 17, (eds) Solveiga Armoskaite and James J. Thompson. 43-55.
Bischoff, Shannon T.	2001	<a href="#">Lynx: a morphological analysis and translation of Dorothy Nicodemus' Coeur d'Alene narrative</a>	University of Montana M.A. thesis.
Bischoff, Shannon T., Ivy Doak, Amy V. Fountain and John Ivens	2013	<a href="#">Creating grass roots digital Coeur d'Alene resources: the COLRC</a>	Northwest Journal of Linguistics. 7. 1-23.
Bischoff, Shannon T., and Amy V. Fountain	2013	Grass-roots development of web-based language archives: the Coeur d'Alene Archive	In Shannon Bischoff, Debbie Cole, Amy Fountain, and Mizuki Miyashita (eds) The Persistence of Language: Constructing and Confronting the Past and Present in the Voices of Jane H. Hill. 175-202. Cambridge: John Benjamins

The site-wide search (for now) returns only results from roots, stems and/or affixes. It should also extend into texts – and new materials that are added

**COLRC** Coeur d'Alene Online Language Resource Center

Search

Tap to launch virtual keyboard

Ready for a search!



COLRC Coeur d'Alene Online Language Resource Center

Search results display, and you can link back to the resource...

Tap to launch virtual keyboard

Results from Root Dictionary | go to the [Root Dictionary](#)

Root	Salish	Nicodemus	English
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
√cq <sup>w2</sup>	*céq <sup>w</sup> +q <sup>w</sup> =alq <sup>w</sup>	tseqwgalqw	dogwood, elderberry bush. Redwood.
√dl <sup>1</sup>	e++dél+ut	eedelut	haunches, seated. (lit. The dog is seated)
√dl <sup>1</sup>	e++dél+dl+ut	eedeldlut	seated. (lit. The dogs are seated)
√k <sup>w</sup> lw	k <sup>w</sup> léw	kwlew	dog (pet name for a...).
√tq <sup>w</sup>	čs+tóq <sup>w</sup> -nt-s	chsłoq <sup>w</sup> nts	depilate. (lit. He removed hair from his (dog's) tail)

Page  of 7
5 rows

Results from Stem Lists | go to the [Stem List](#)

Category	Reichard	Doak	Salish	Nicodemus	English	Note
Show All <input type="button" value="v"/>	<input type="text"/>	<input type="text"/>				
verb	wih	wih	wih	wih	dog barks	
noun	wáx-itp		wáx-itp	waqh-itp	dogwood	
noun	siw's		siw's	si'ws	groundhog, prairie dog	

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Dictionary History Metadata

- Introduction
- Guide to Entries
- Guide to Symbols and Abbreviations

Lyon and Green-Wood's Root Dictionary

If you do a site-wide search, then navigate back to a table from your results page, the table remembers what you searched for and passes it in as a local search.

+ Add a root

Tap to launch virtual keyboard

From there you can refine or expand the search locally in that specific table.

Root	Nicodemus	English
<input type="text"/>	<input type="text"/>	<input type="text"/>
√cq <sup>w</sup> 2	tseqwgalqw	dogwood, elderberry bush. Redwood.
√dl <sup>1</sup>	eedelut	haunches, seated. (lit. The dog is seated)
√dl <sup>1</sup>	eedeldlut	seated. (lit. The dogs are seated)
√kw <sup>1</sup> w	kwlew	dog (pet name for a...).
√tq <sup>w</sup>	chstoq <sup>w</sup> nts	depilate. (lit. He removed hair from his (dog's) tail)

Users can create an account if they want

### Create an account

[already have one?](#)





### Log in to your account

[Submit](#)

[need to create an account?](#)

There's a little login screen 😊

### Set User Roles

You are currently logged in as [original](#)

First	Last	Username	Email	Role	Edit Roles
Original	Data	original	colrc@gmail.com	admin	
Update	Data	update	update@gmail.com	update	
Owner	Data	owner	owner@gmail.com	owner	
View	Data	view	view@gmail.com	view	

Previous Page 1 of 1 20 rows Next

Admin users can see other users' roles, and edit them. Note that all these accounts are fake – just for testing purposes

## Update User Roles

### Select a new role for this user.

'admin' = can update all information on this site, including user roles.

'update' = can update all information on this site except user roles.

'owner' = reserved to allow update access to individual areas.

'view' = cannot update information on this site.

ID

3

First Name

Owner

Last Name

Data

Username

owner

Email

owner@gmail.com

### Select Role

owner

admin

**owner**

update

view

# Lots of work to do!

- COLRC 2.0 will be home for a wealth of materials that cannot be found in 1.0
- COLRC 2.0 will need a lot more features (export/download, import/upload, search into text...)
- COLRC 2.0 will need lots of testing for usability, reliability and cross-platform performance
- And we're looking forward to it.

# lim lemt.sh

Coeur d'Alene Language Programs, ALLDI, contributing UA students Wunetu Tarrant, Angela Hughes, Timothy Chartier, Amaris Le Fay, Zhengnan Xie, Karina Casey, and our technical lead John W. Ivens.

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Questions or comments about the tech? Contact Amy at [avf@email.arizona.edu](mailto:avf@email.arizona.edu)

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