

THE SEEDSKADEE PROJECT: **Remote Sensing in Non-site Archeology**

**Edited by DWIGHT L. DRAGER
and ARTHUR K. IRELAND**

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**UNITED STATES
DEPARTMENT OF THE INTERIOR
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Southwest Cultural Resources Center
Division of Cultural Research
Branch of Remote Sensing
Albuquerque, New Mexico
and
Bureau of Reclamation
Upper Colorado Region
Salt Lake City, Utah
1986**



This collection of diagnostic projectile point drawings is the result of necessity. In reviewing the over 850 site records for the Seedskaadee area which we received from the State Historic Preservation Officer's files in Laramie, it became obvious that many sites were not being dated other than very generally (for example, Middle Prehistoric Period). There appear to be several reasons for this. First, except for Frison's Prehistoric Hunters of the High Plains (1978), there has been no extensive effort in Wyoming to synthesize the various cultural entities found in the archeological record there. Secondly, many of the projectile point types found in the southwestern corner of Wyoming are not Plains types but rather are from the Great Basin and/or the Intermountain-Plateau regions, areas which have also been barely summarized (Butler 1966; Fowler 1968a & b; Heizer & Baumhoff 1961; Jennings 1978).

With that in mind, I started collecting drawings and photographs of diagnostic projectile points which could conceivably be found in the Seedskaadee project area. I have tried to remain objective in my selection of examples, my classification of the projectile points, and their dating. The classification of the projectile points has been essentially as the original authors designated them. In philosophy, I am a "splitter". Hence, while the original author may have given a projectile point a general name (for example, Desert Side-notched), if I felt it could be assigned to a previously-designated variety or sub-type (for example, Desert Side-notched, Sierra Variety), I did so. In several rare cases (primarily very early works) where I felt that a projectile point had been mis-identified, I classified it to the best of my judgement. In a few cases where the original author did not classify the points found on their project and I felt that I could confidently identify it, I did so. Dates are as the original authors assigned them. I have used the broadest time spans assigned by various authors.

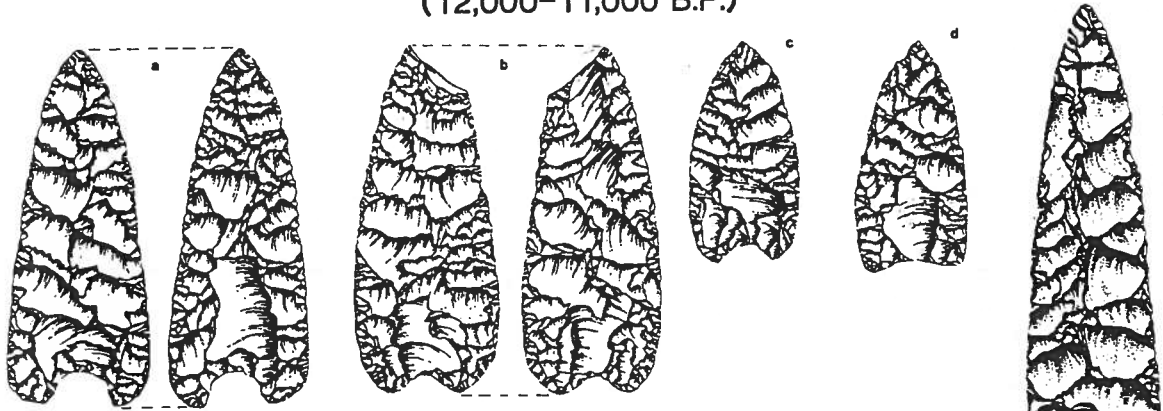
I would also like to note that, by comparing drawings of projectile points found on the 1983 Seedskaadee project survey or the actual points themselves, I was able to identify, with reasonable confidence, 95% of those projectile points.

A.K. Ireland

PLAINS TYPOLOGIES

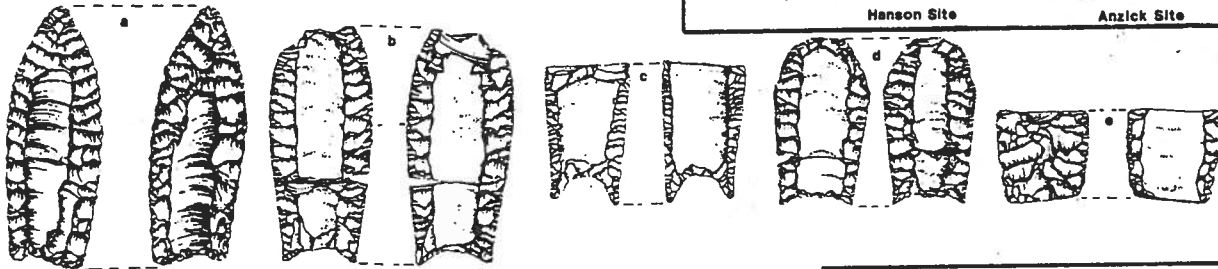
PALEO-INDIAN (12,000-8,000 B.P.)

Clovis (12,000-11,000 B.P.)



Colby Site

Folsom (11,000-10,500 B.P.) Folsom (fluted)



Hanson Site

Anzick Site

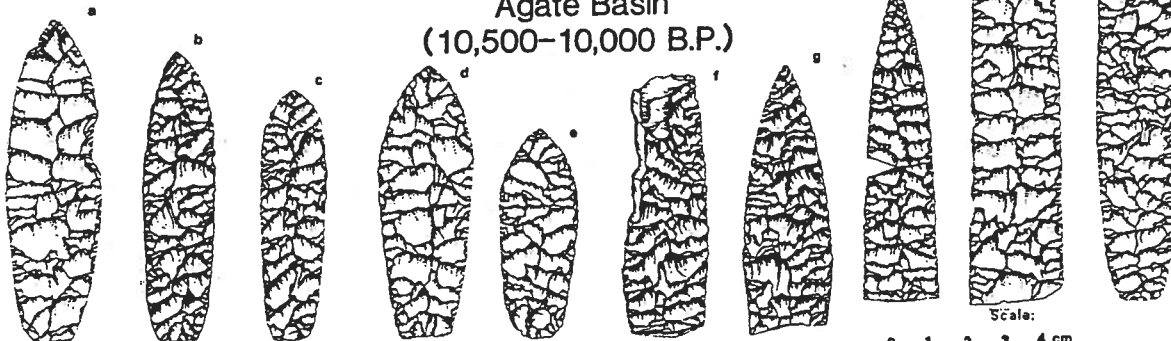
Midland (unfluted)



Hanson Site

Isolated finds

Agate Basin (10,500-10,000 B.P.)

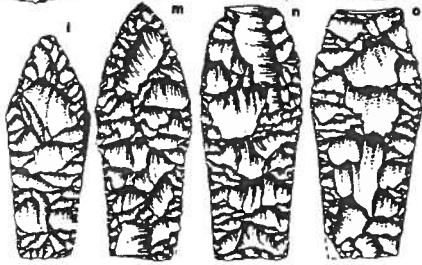
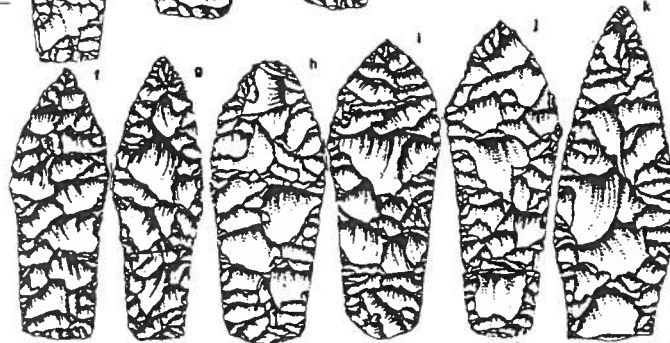
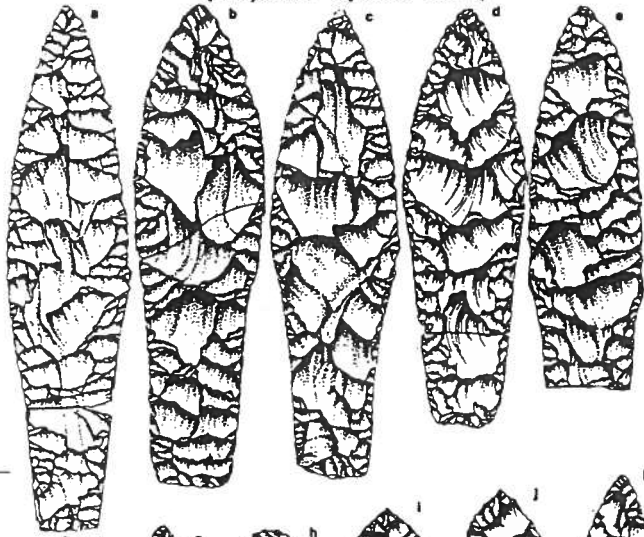


Agate Basin Site



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National Park Service
1983

Hell Gap
(10,000-9,500 B.P.)



Casper Site

Alberta
(9,500-9,000 B.P.)



Hudson-Meng

Isolated find
near La Barge
(WY)

near Red Deer
(ALTA)

near Edmonton
(ALTA)

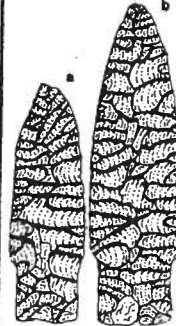
Plainview (10,000-9,000 B.P.)



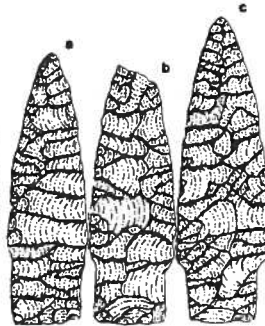
Medicine Lodge
Creek Site

Cody Complex
(9,000-8,500 B.P.)

Scottsbluff I



Carter-McGee Site



Horner Site



Cody Knife

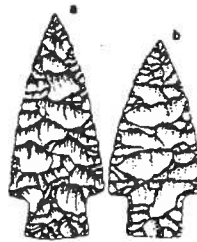


Finley Site



Horner Site

Scottsbluff II

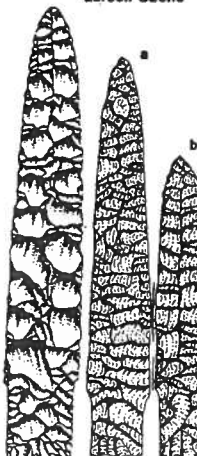


Larson Cache



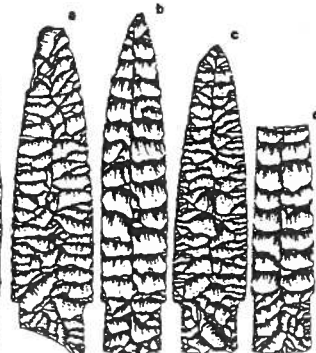
Finley Site

Eden



Horner Site

Carter-McGee
Site



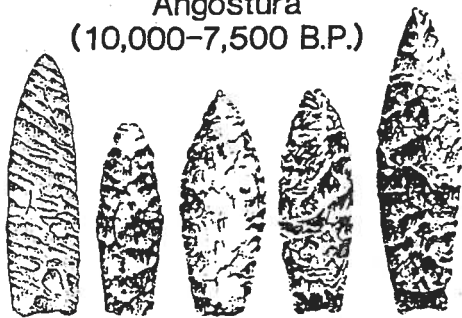
Finley Site

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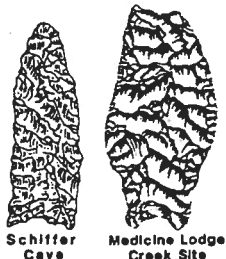
TERMINAL PALEO-INDIAN

Angostura
(10,000-7,500 B.P.)



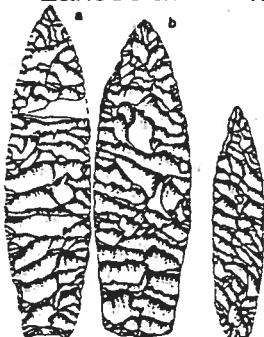
Lanceolates
(8,500-8,000 B.P.)

Lanceolate I



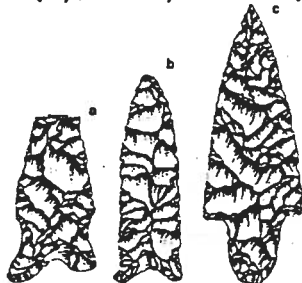
Schiffer Cave Medicine Lodge Creek Site

Lanceolate II



Medicine Lodge Creek Site Southalder Cave

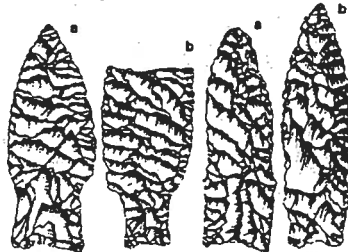
Split Base & Round Base
(9,600-9,000 B.P.)



Medicine Lodge Creek Site

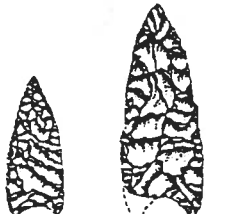
MOUNTAIN PALEO-INDIAN

Parallel-Oblique
Lanceolate
(8,500-8,000 B.P.)
Pryor Stemmed



Paint Rock V Site Medicine Lodge Creek Site Schiffer Cave

McKean-like Lanceolate
Terminal Paleo-Indian
(undated)



Southalder Cave Medicine Lodge Creek Site

Lovell Constricted



Schiffer Cave Medicine Lodge Creek Site

Jimmy Allen (8,400-7,500 B.P.)



Jimmy Allen Site

EARLY PLAINS ARCHAIC
(7,500-5,000 B.P.)

Corner-notched



Southalder Cave Wedding of the Waters Cave

Side-notched

Hawken(?)



Lookingbill Site Liddle Creek Site

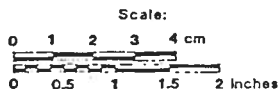
Southalder Cave

Hawken



Hawken Site

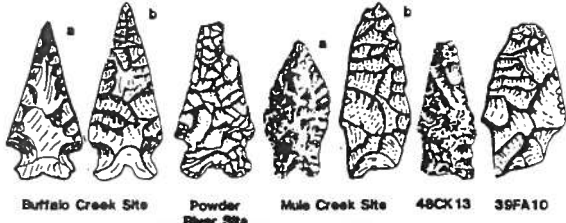
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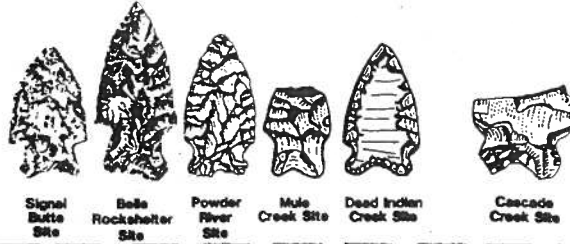
MIDDLE PLAINS ARCHAIC

McKean Techno-Complex (5,000-2,500 B.P.)

Duncan

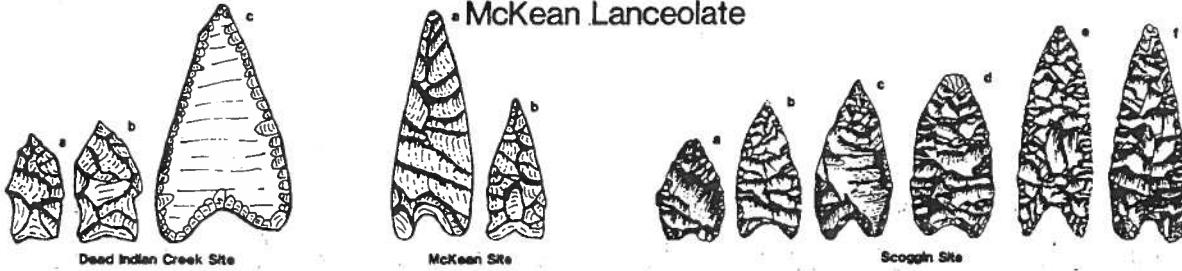


Hanna

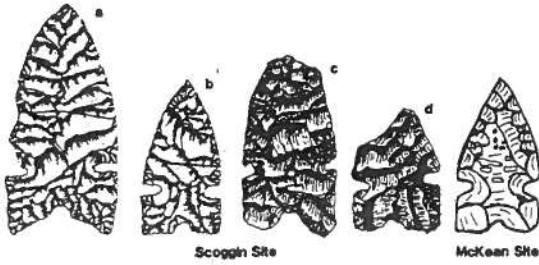


Oxbow-like Variant

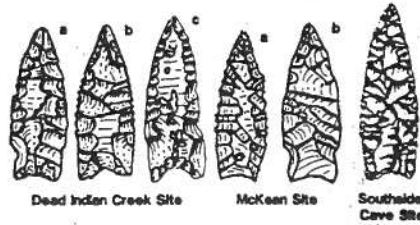
McKean Lanceolate



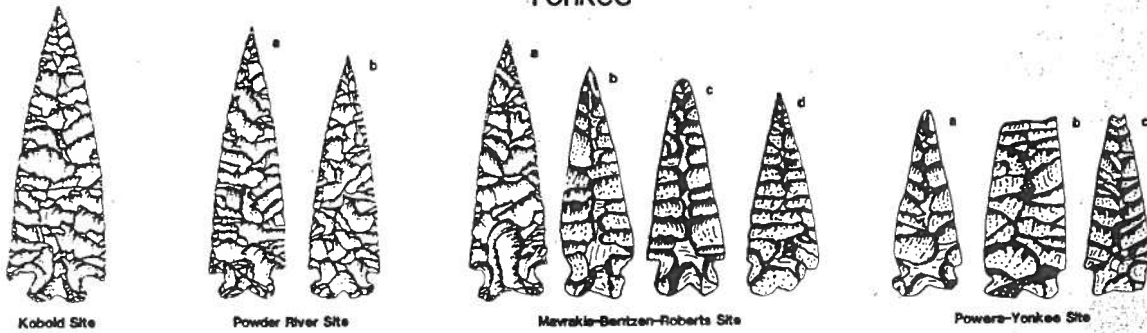
Mallory Side-Notched



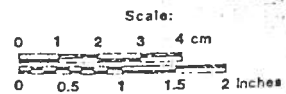
McKean Lanceolate (Southsider Variant)



Yonkee



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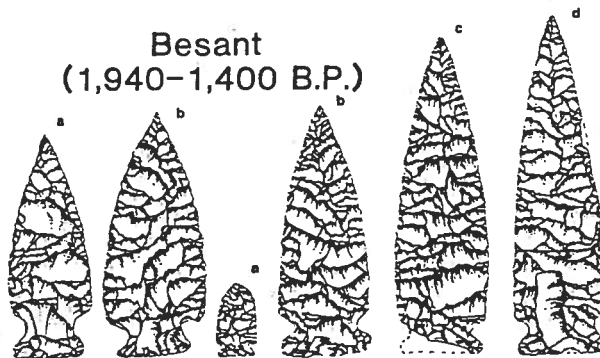
LATE PLAINS ARCHAIC (3,100-1,400 B.P.)

Pelican Lake (3,100-1,850 B.P.)



Medicine Lodge Creek Site

Besant (1,940-1,400 B.P.)



Ruby Site

Muddy Creek Site

Large Corner-notched



48LN864



48UT805



48UT610



48UT612



48UT628



Isolated finds



Kobold Site



Site #1



Site #3



Site #4



Site #5



Site #6



Site #7



Site #8



Site #9

Killpecker Dune Field



Level III, upper



Level II

Wedding of the Waters Cave



Small Corner-notched



Wedding of the Waters Cave, Level III, lower

Large Side-notched



48LN851



Site #1



Site #3



Wedding of the Waters Cave,

Killpecker Dune Field Level III, upper

Large Side-notched, basally-notched



Wedding of the Waters Cave,

Level II

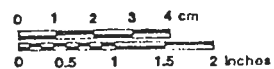
Triangular



Wedding of the Waters Cave,

Level III, lower

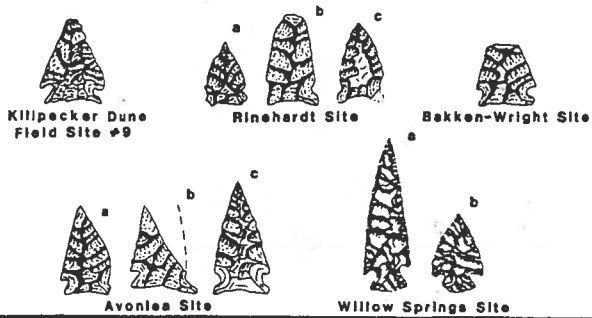
Scale:



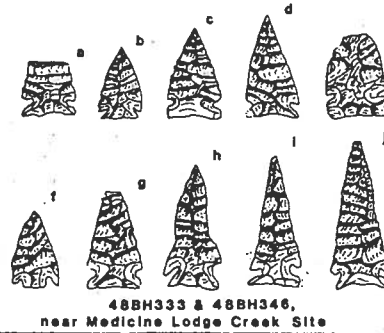
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National Park Service
1983

LATE PLAINS PREHISTORIC-EARLY PLAINS HISTORIC

Avonlea (1,900-1,370 B.P.)



Unnamed Complex



Prairie Side-notched (1,380-600 B.P.)

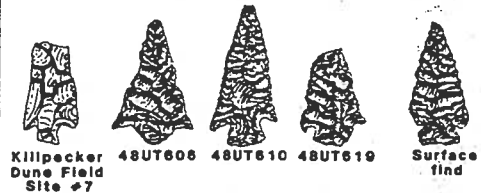
Nanton Wide Rounded-base Variety
Irvine Narrow Square-base Variety



Small Corner-notched

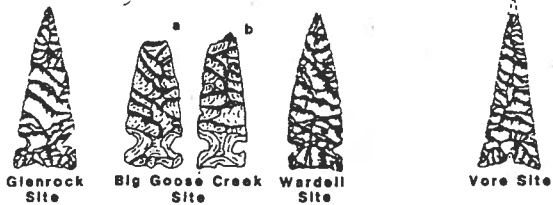


Medium Corner-notched



Plains Side-notched (600-200 B.P.)

Washita Triangular Variety
Farson Tri-notched Variety



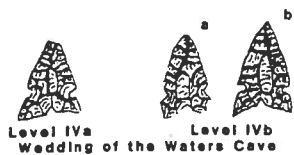
Skinny Corner-notched



Small Side-notched



Billings Double-spur, Basal-notched Variety



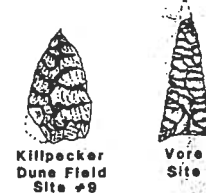
Emigrant Basal-notched Variety



Small Triangular



Large Triangular



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National Park Service
1993



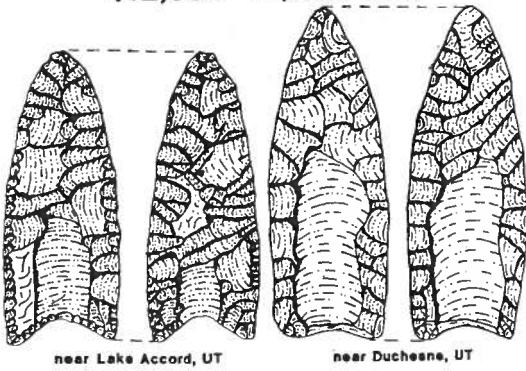
GREAT BASIN TYPOLOGIES

PALEO-INDIAN (12,000-8,000 B.P.)

Clovis
(12,000-11,000 B.P.)

Folsom
(11,000-10,500 B.P.)

Danger Cave
Lanceolate
(10,500 B.P.)

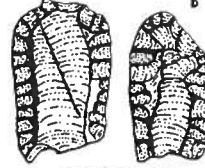


near Lake Accord, UT

near Duchesne, UT



Silverhorn Site (UT)



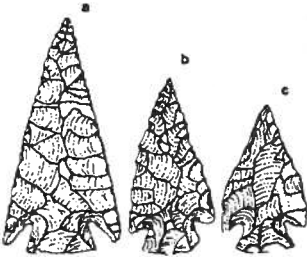
near Moab, UT



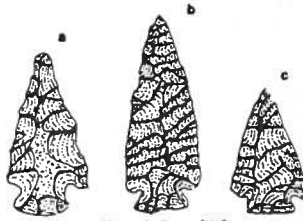
Danger Cave (UT),
Level: Sand 1

TERMINAL PALEO-INDIAN/ARCHAIC ELKO-BITTERROOT SERIES (10,000-500 B.P.)

Elko Corner-notched



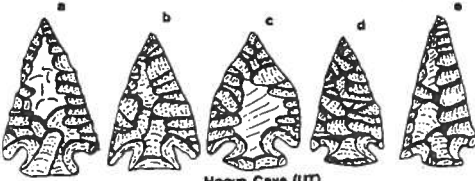
NV EL 11



Newark Cave (NV)



Wagon Jack Shelter (NV)



Hogup Cave (UT)

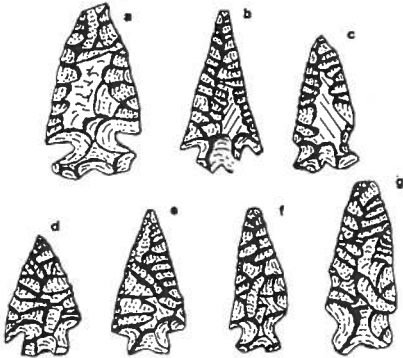


NE Nevada Survey

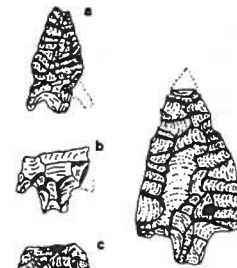
Elko Split-stem

Elko Contracting-stem

Elko Side-notched

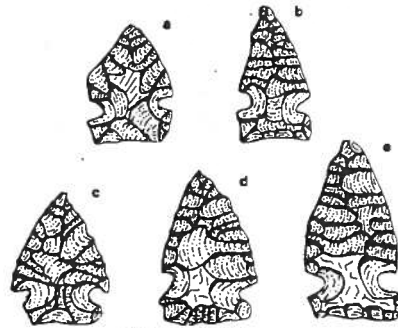


Hogup Cave (UT)



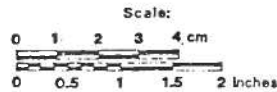
NE Nevada Survey

Wagon Jack Shelter (NV)



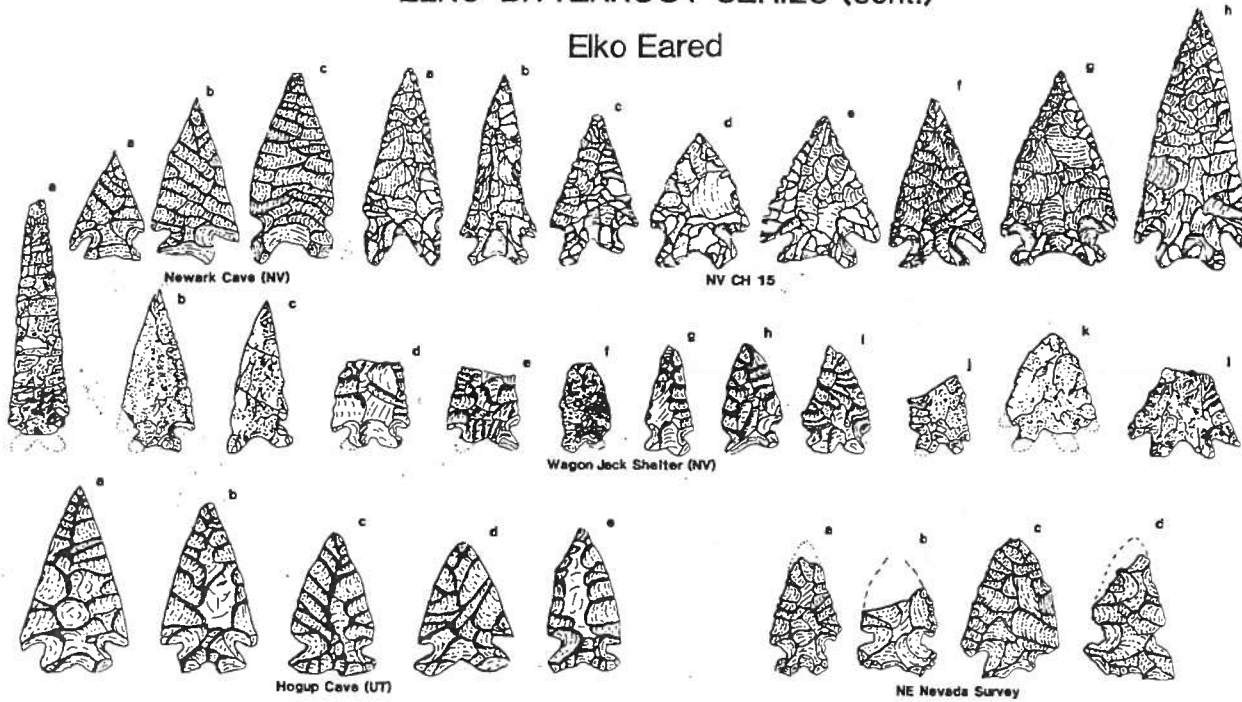
Hogup Cave (UT)

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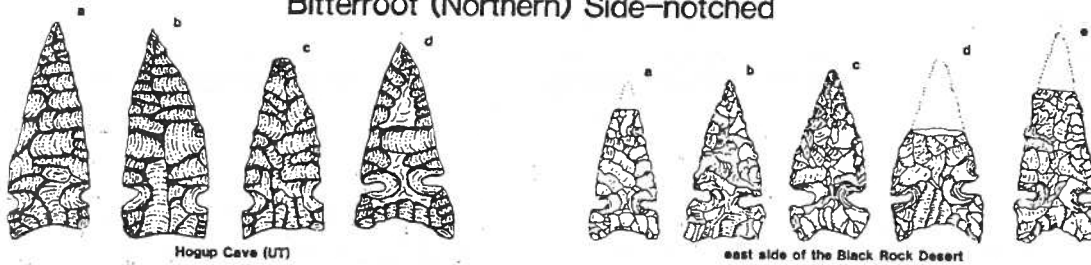


ELKO-BITTERROOT SERIES (cont.)

Elko Eared



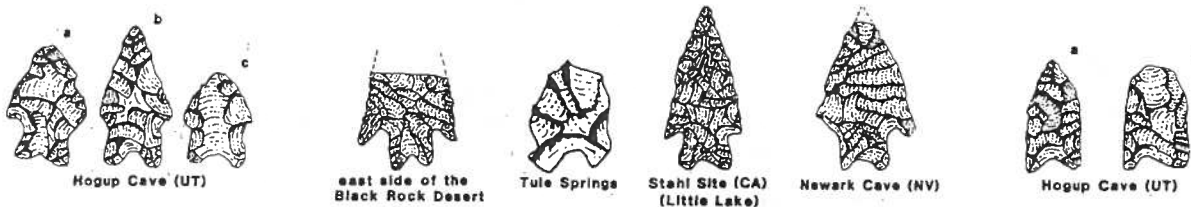
Bitterroot (Northern) Side-notched



PINTO BASIN SERIES (6,000-3,000 B.P.)

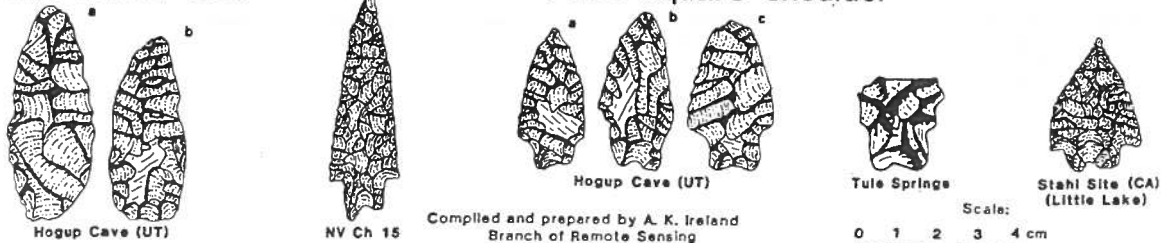
Pinto Barbed

Pinto Shoulderless

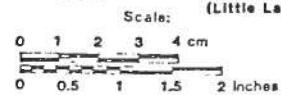


Pinto Willow-leaf

Pinto Square-shoulder

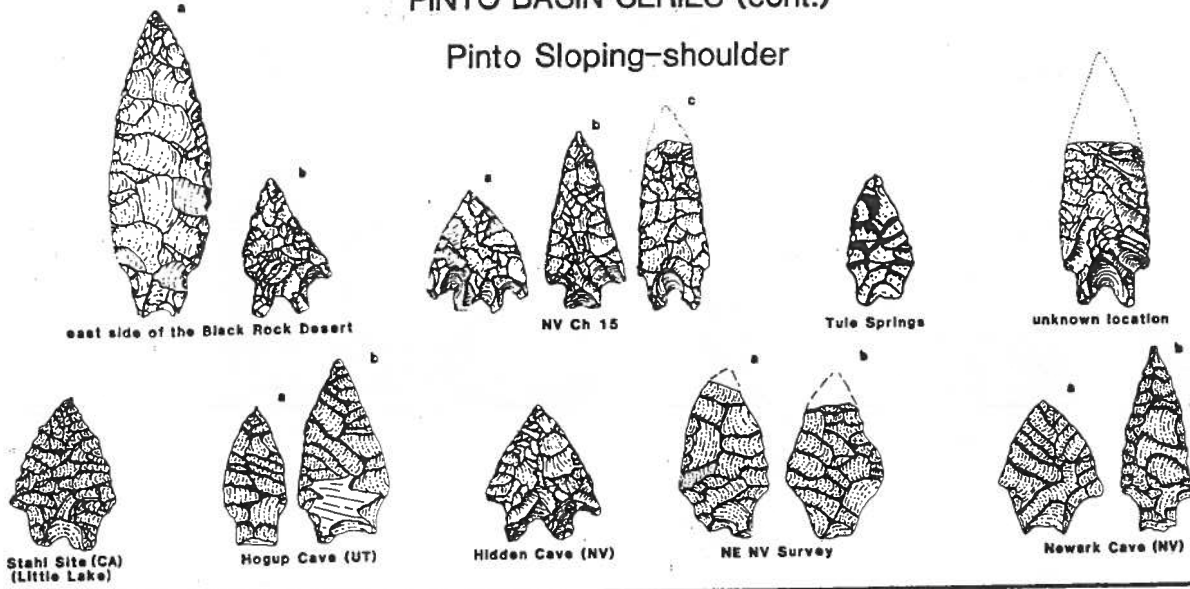


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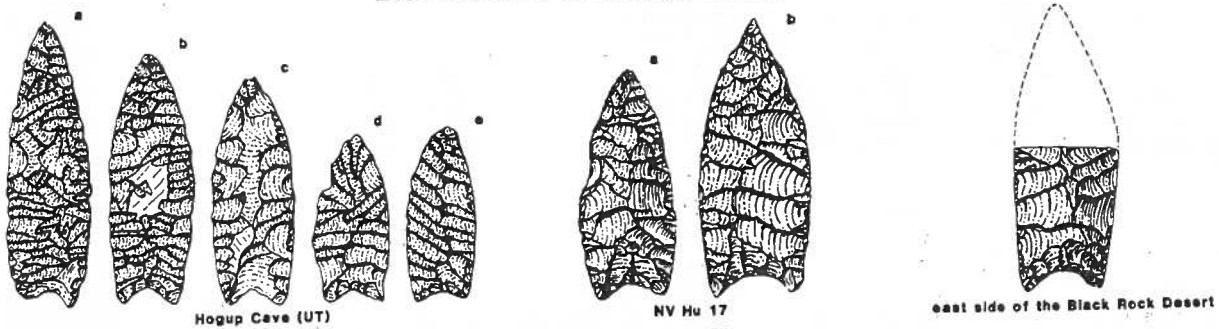
PINTO BASIN SERIES (cont.)

Pinto Sloping-shoulder

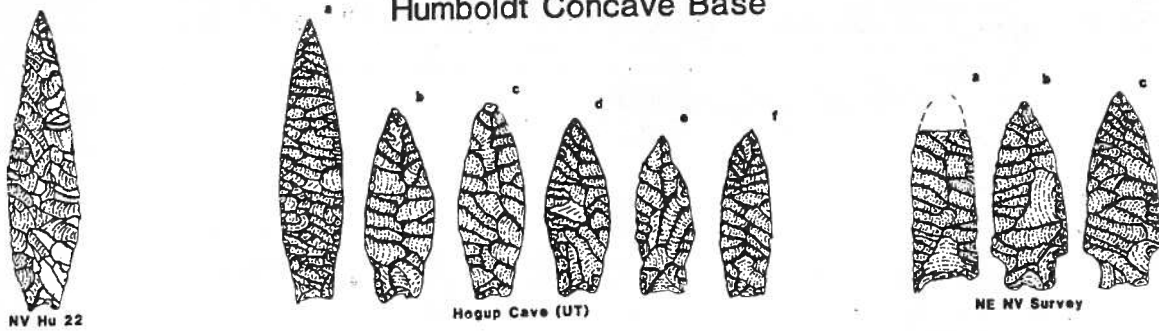


BLACK ROCK-HUMBOLDT SERIES (5,000-3,000 B.P.)

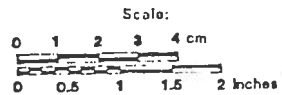
Black Rock Concave Base



Humboldt Concave Base



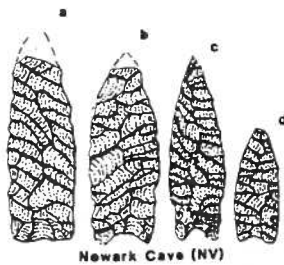
Compiled and prepared by A. K. Ireland
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 National Park Service
 1983



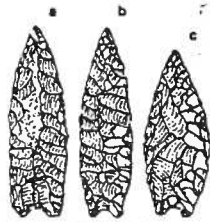
BLACK ROCK-HUMBOLDT SERIES (cont.)

Humboldt Concave Base (cont.)

Humboldt Basal-notched



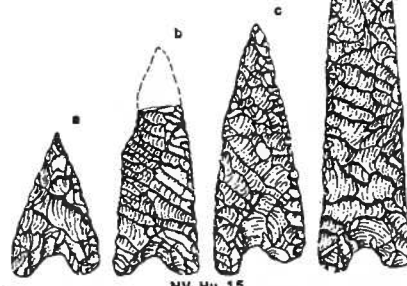
Newark Cave (NV)



NV Hu 15



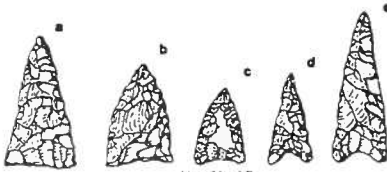
Wagon Jack Shelter (NV)



NV Hu 15

DESERT COMPLEX (4,000-250 B.P.)

Cottonwood Triangular



NV Ch 15



NE NV Survey

Newark Cave (NV)



Wagon Jack Shelter (NV)



Evans Site (UT)

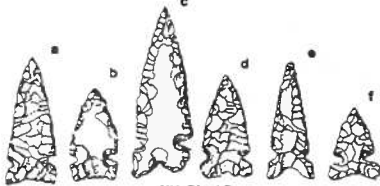


Caldwell Village (UT)



Hogup Cave (UT)

Desert Side-notched



NV Ch 15



NE NV Survey



Newark Cave (NV)

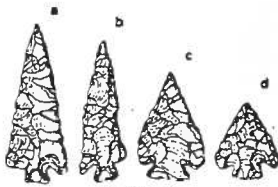


Wagon Jack Shelter (NV)



Hogup Cave (UT)

ROSE SPRING SERIES
Rose Spring Corner-notched



NV Ch 15



Wagon Jack Shelter (NV)



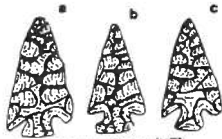
NE NV Survey



Newark Cave (NV)

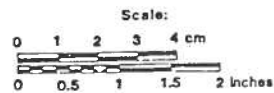


Caldwell Village (UT)



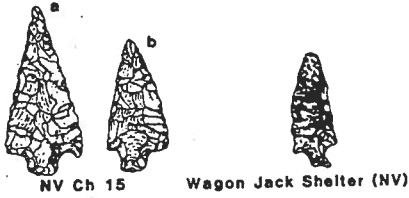
Hogup Cave (UT)

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National Park Service
1983



ROSE SPRINGS SERIES (cont.)

Rose Springs
Contracting-stem



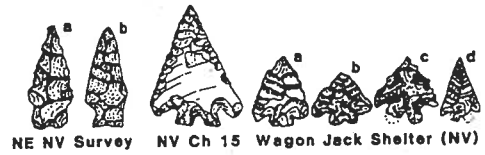
NV Ch 15 Wagon Jack Shelter (NV)

Rose Springs
Side-notched



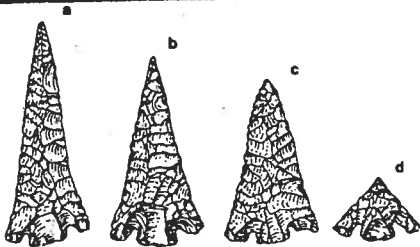
Hogup Cave (UT)

Eastgate
Split-stem

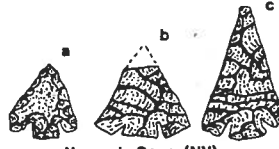


NE NV Survey NV Ch 15 Wagon Jack Shelter (NV)

EASTGATE SERIES
Eastgate Expanding-stem



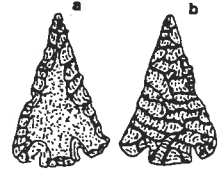
NV Ch 15



Newark Cave (NV)



unknown locations



NE NV Survey



Wagon Jack Shelter (NV)



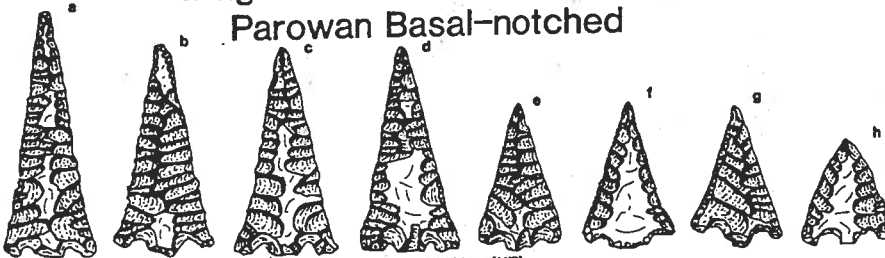
Hogup Cave (UT)

FREMONT (1,550-600 B.P.)

Parowan Fremont

Paragonah Phase (900-800 B.P.)

Parowan Basal-notched

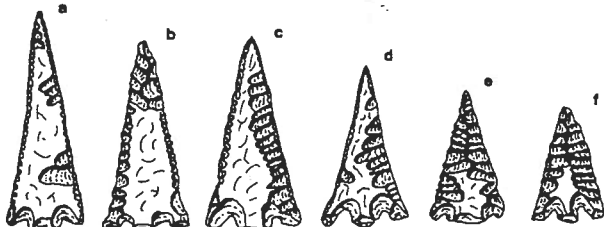


Evans Site (UT)

Side-notched

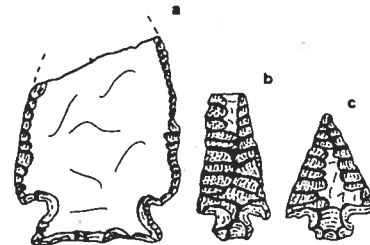


Evans Site (UT)



Median Village (UT)

Corner-notched

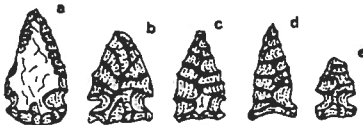


Evans Site (UT)

Uinta Fremont

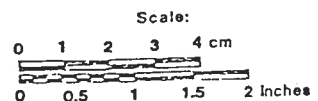
White Rocks Phase (1,150-1,000 B.P.)

Side-notched



Caldwell Village (UT)

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INTER-MOUNTAIN/PLATEAU TYPOLOGIES

PALEO-INDIAN (12,000-8,000 B.P.)

Clovis
(12,000-11,000 B.P.)



Midland
(unfluted)



Folsom
(11,000-10,500 B.P.)

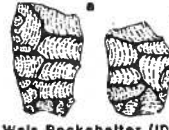
Folsom
(fluted)



Agate Basin
(10,500-10,000 B.P.)



Plainview
(10,000-9,000 B.P.)



Milnesand
(9,500-8,500 B.P.)



SE Snake River Floodplain

10-FM-50 (ID)

near Glenn's Ferry (ID)

Wels Rockshelter (ID)

10-FM-26 (ID)

Wels Rockshelter (ID)

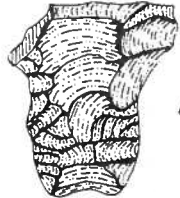
10-OE-124 (ID)

Lind Coulee (12,000-9,000 B.P.)



Lind Coulee Site (WA)

Alberta
(9,500-9,000 B.P.)



Coyote Flat (OR)

10-TF-55 (ID)

10-TF-106 (ID)

near Jerome (ID)

Cody Complex
(9,000-8,500 B.P.)

Eden



SW Idaho survey

Scottsbluff I



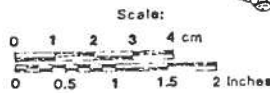
Coyote Flat (OR)



Cooper's Ferry (ID)



unknown location



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PALEO-INDIAN (cont.)
 Birch Creek (9,000-7,000 B.P.)
 Type A Type B
 Windust Phase (10,000-8,000 B.P.)



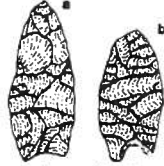
unknown location



BLM Seimon District (ID) survey



Lind Coulee Site (WA)



unknown location

McKean-like Lanceolate possibly Paleo-Indian (undated)



10-OE-69 (ID)



10-TF-61 (ID)



10-TF-108 (ID)

TERMINAL PALEO-INDIAN possibly Terminal Paleo-Indian Lanceolate I (undated)



10-OE-124 (ID)



10-TF-14 (ID)



10-OE-119 (ID)

possibly Terminal Paleo-Indian Lanceolate II (undated)



10-TF-55 (ID)



National Reactor Testing Station (ID) survey



TERMINAL PALEO-INDIAN/ARCHAIC ELKO-BITTERROOT SERIES (9,000-880 B.P.)
 Bitterroot (Northern) Side-notched (9,000-3,000 B.P.)



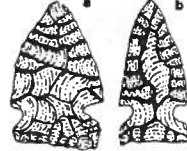
unknown location



10-OE-129 (ID)



unknown location



Craters of the Moon National Monument (ID)



10-OE-128 (ID)



Jackknife Cave (ID)



National Reactor Testing Station (ID) survey



Coyote Flat (OR)

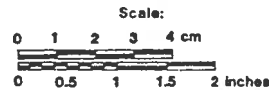


Hells Canyon (ID/OR)

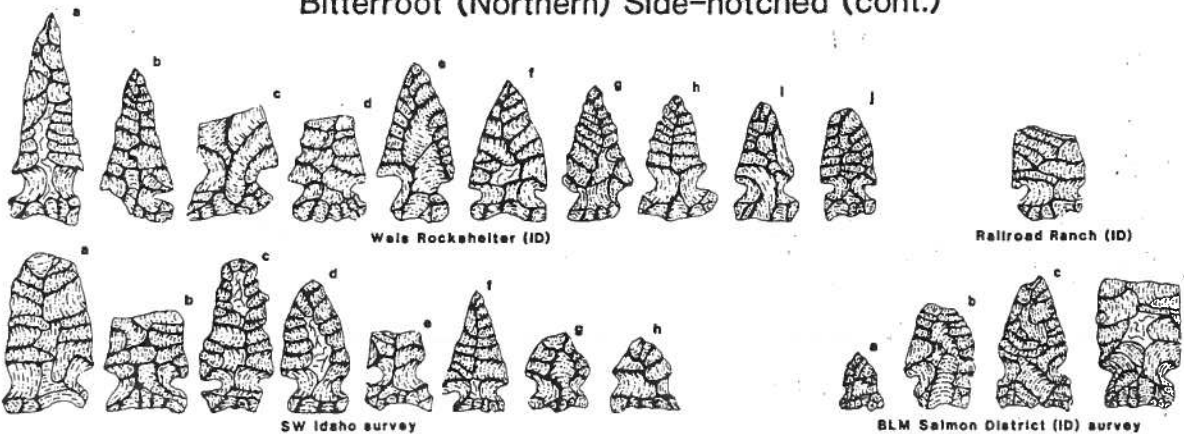


Grave Creek/Rocky Canyon Locality (ID)

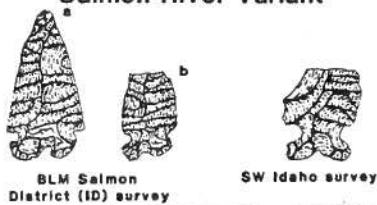
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TERMINAL PALEO-INDIAN/ARCHAIC (cont.)
Bitterroot (Northern) Side-notched (cont.)



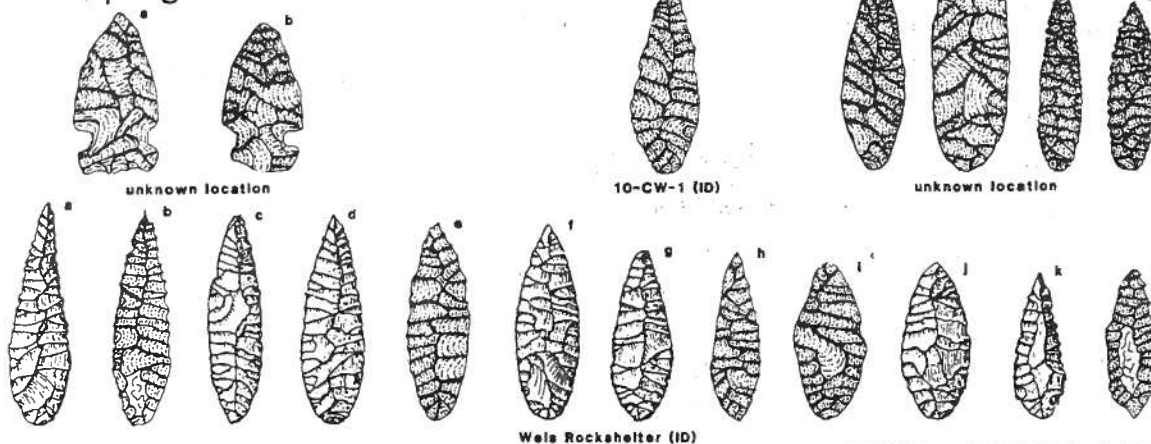
Salmon River Variant



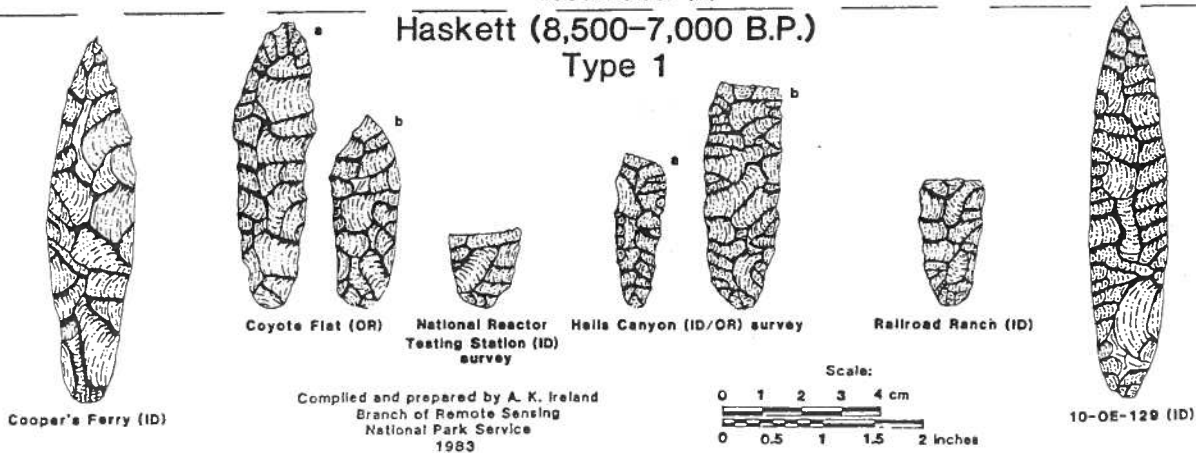
CASCADE PHASE (8,000-5,000 B.P.)

Cascade

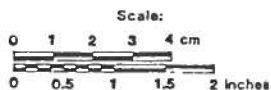
Cold Springs Side-notched



Haskett (8,500-7,000 B.P.)
Type 1



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TERMINAL PALEO-INDIAN/ARCHAIC (cont.)
Haskett (cont.)

Type 1 (cont.)

Type 2



Haskett Site (ID)
10-PR-37



Railroad Ranch (ID)

Haskett Site (ID)
10-PR-37

ARCHAIC

BLACK ROCK-HUMBOLDT-MCKEAN-PINTO BASIN SERIES
(7,850-2,500 B.P.)

Black Rock Concave-base
(7,850-2,650 B.P.)

Humboldt Concave-base
(5,920-3,100 B.P.)



Warner Valley Site (OR)



Owl Cave (ID)
10-BV-30



Coyote Flat (OR)

Mckean
(5,000-2,500 B.P.)

Humboldt Basal-notch



Wilson Butte Cave (ID)



SW Idaho survey



National Reactor Testing
Station (ID) survey

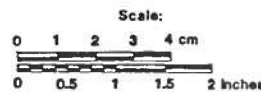


Coyote Flat (OR)



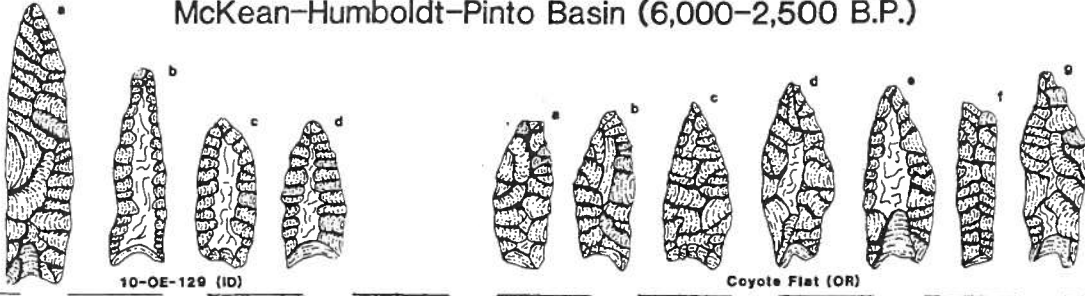
near Glenn's Ferry (ID)

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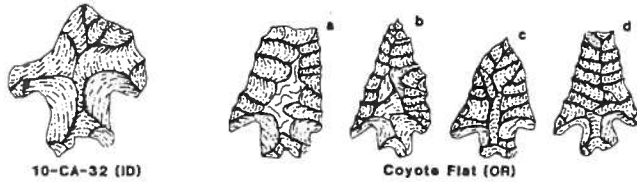
ARCHAIC (cont.)

McKean-Humboldt-Pinto Basin (6,000-2,500 B.P.)

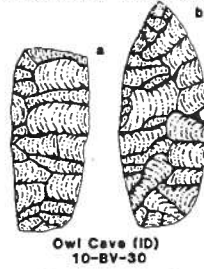


Pinto Basin Series (5,300-2,700 B.P.)

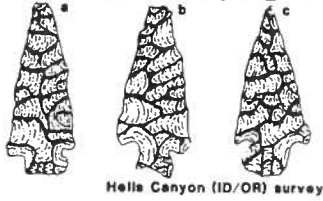
Pinto Basin Barbed



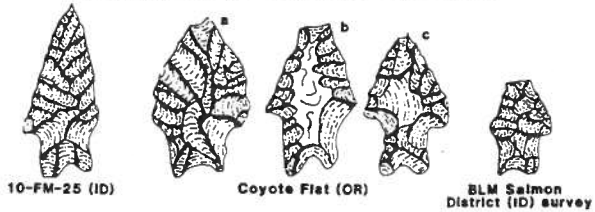
Pinto Basin Willow-leaf



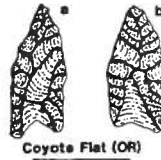
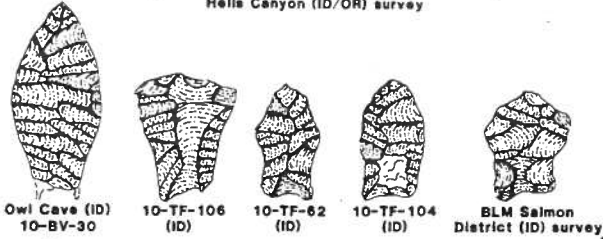
Pinto Basin Sloping-shoulder



Pinto Basin Square-shoulder

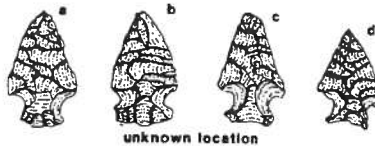


Pinto Basin Shoulderless

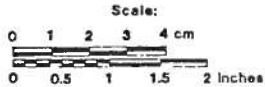
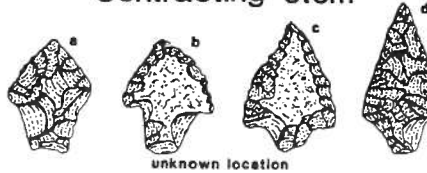


TUCANNON PHASE (5,200-2,500 B.P.)

Corner-notched

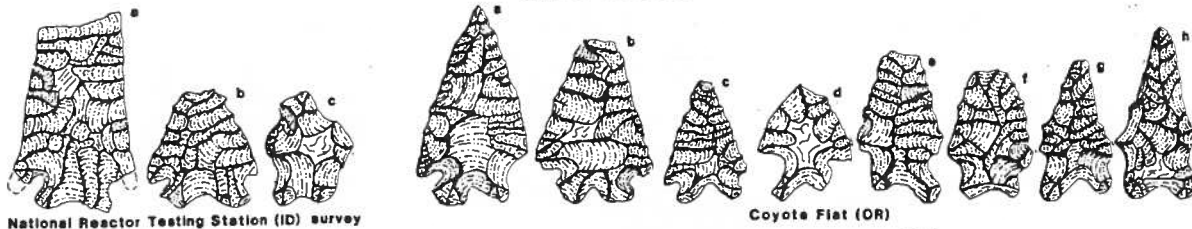


Contracting-stem

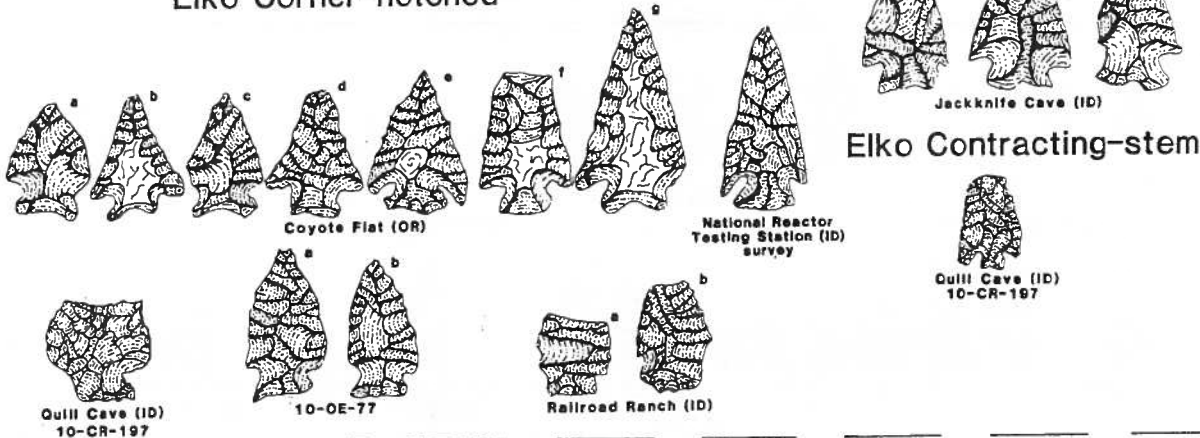


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ARCHAIC/LATE PREHISTORIC
Elko Series (4,000-820 B.P.)
Elko Eared



Elko Corner-notched



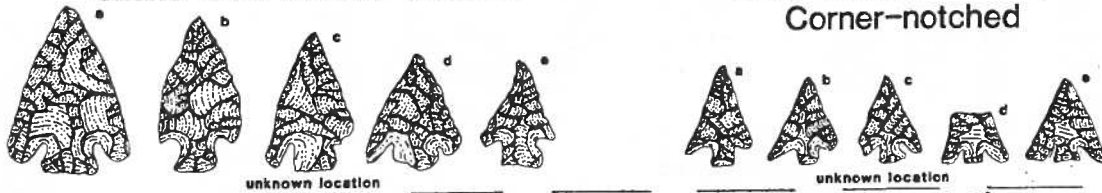
Elko Contracting-stem



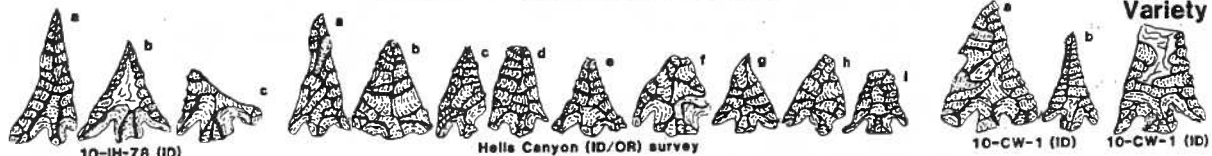
HARDER PHASE (2,500-700 B.P.)

Snake River Corner-notched

early Columbia Valley
Corner-notched

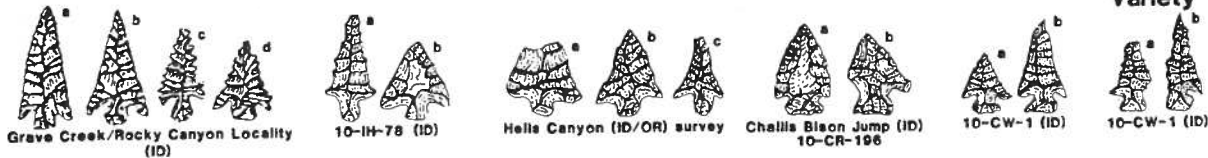


Columbia Valley Corner-notched (600 B.P.-Historic?)
Middle Columbia Basal-notched

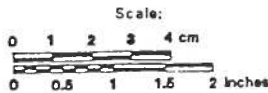


Wallula Rectangular-stem

North Fork
Variety



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ARCHAIC/LATE PREHISTORIC (cont.)
 PIQUÍNIN PHASE (700-250 B.P.)

Middle Columbia Basal-notched



Wepusnime Site (WA)

Wallula

Rectangular-stem



Wepusnime Site (WA)

Side-notched



Wepusnime Site (WA)

DESERT COMPLEX

Desert Side-notched (1,250 B.P.-Historic)

General Variety



BLM Salmon District (ID) survey

Challis Bison Jump (ID)
10-CR-196

Redding Variety



National Reactor Testing Station (ID) survey
Hells Canyon (ID/OR) survey

Challis Bison Jump (ID)
10-CR-196

Sierra Variety



Challis Bison Jump (ID)
10-CR-196

National Reactor Testing Station (ID) survey
Wilson Butte Cave (ID)

Craters of the Moon National Monument (ID)

Delta Variety



Challis Bison Jump (ID)
10-CR-196

SW Idaho survey

Cottonwood Triangular (1,050 B.P.-Historic)



National Reactor Testing Station (ID) survey

Eastgate Series (1,450 B.P.-Historic)

Eastgate Expanding-stem Eastgate Split-stem



Hells Canyon (ID/OR) survey

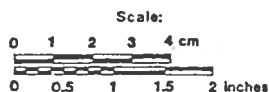
Hells Canyon (ID/OR) survey

Avonlea (1,900-600 B.P.)



National Reactor Testing Station (ID) survey

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 1983



BIBLIOGRAPHIC SOURCES FOR THE PROJECTILE POINT DRAWINGS AND DATES

PLAINS SEQUENCES

Clovis	Frison 1978
Folsom	Frison 1978
Midland	Frison 1978
Agate Basin	Frison 1978
Hell Gap	Frison 1978
Plainview	Frison 1978
Alberta	Frison 1978, Wormington 1957, Reynolds 1983
Cody Complex	
Cody Knife	Frison 1978, Jennings 1974
Scottsbluff I	Frison 1978
Scottsbluff II	Frison 1978
Eden	Frison 1978
Angostura	Wormington 1957, Jennings 1974
Mountain Paleo-Indian	
Split/Round Base	Frison 1978
Pryor Stemmed	Frison 1978
Lovell Constricted	Frison 1978
Terminal Paleo-Indian	
Lanceolate I	Frison 1978
Lanceolate II	Frison 1978
McKean-like Lanceolate	Frison 1978
Jimmy Allen	Mulloy 1959, Frison 1978
Early Plains Archaic	
Corner-notched	Frison 1978
Hawken	Frison 1978
Duncan	Wheeler 1954, Jennings 1974, Ziemens & Walker 1977a & 1977b, Frison 1978
Hanna	Wheeler 1954, Jennings 1974, Frison 1974
Oxbow Variant	Breckenridge 1974
McKean Lanceolate	Frison, Wilson, & Wilson 1974, Ziemens & Walker 1977a & 1977b, Frison 1978
McKean Lanceolate (South-sider Variant)	Frison 1978
Yonkee	Frison, Wilson, & Wilson 1974, Frison 1978
Pelican Lake	Ziemens & Walker 1977a & 1977b, Frison 1978
Besant	Frison 1978
Late Plains Archaic	
Small Corner-notched	Frison 1962
Large Corner-notched	Frison 1962 & 1978, Ahlbrandt 1974, Zier & Peebles 1982
Large Side-notched	Frison 1962, Ahlbrandt 1974, Zier & Peebles 1982
Large Side-notched, Basal-notched	Frison 1962
Triangular	Frison 1962
Avonlea	Kehoe & McCorquodale 1961, Ahlbrandt 1974, Ziemens & Walker 1977a & 1977b, Frison 1978
Prairie Side-notched	
Nanton variety	Kehoe 1967, Frison 1978
Irvine variety	Kehoe 1967, Frison 1978

Plains Side-notched	
Washita Triangular	Kehoe 1967, Ziemens & Walker 1977a & 1977b, Frison 1978
Washita Tri-notched	Kehoe 1967, Frison 1978
Billings Double-spur, Basal-notched	Kehoe 1967, Frison 1978
Emigrant Basal-notched	Kehoe 1967, Frison 1978
Late Prehistoric/Early Historic	
Unnamed Complex	Frison 1978
Small Corner-notched	Ahlbrandt 1974, Zier & Peebles 1982
Medium Corner-notched	Ahlbrandt 1974, Zier & Peebles 1982
Skinny Corner-notched	Ahlbrandt 1974
Small Side-notched	Ahlbrandt 1974
Small Triangular	Frison 1962
Large Triangular	Ahlbrandt 1974, Frison 1978

GREAT BASIN SEQUENCES

Clovis	Crouse 1954, Tripp 1966,
Folsom	Gunnerson 1956, Hunt & Tanner 1960
Danger Cave Lanceolate	Jennings 1978
Elko-Bitterroot Series	
Elko	
Corner-notched	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Split-stem	Jennings 1978
Contracting-stem	Heizer & Baumhoff 1961, Fowler 1968a
Side-notched	Jennings 1978
Eared	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Bitterroot (Northern)	
Side-notched	Heizer & Hester 1978, Jennings 1978
Pinto Basin Series	
Barbed	Wormington 1957, Fowler 1968b, Heizer & Hester 1978, Jennings 1978
Shoulderless	Jennings 1978
Willow-leaf	Jennings 1978
Square-shoulder	Wormington 1957, Heizer & Hester 1978, Jennings 1978
Sloping-shoulder	Wormington 1957, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Black Rock-Humboldt Series	
Black Rock Concave Base	Heizer & Hester 1978, Jennings 1978
Humboldt Concave Base	Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Humboldt Basal-notched	Heizer & Baumhoff 1961, Heizer & Hester 1978
Desert Complex	
Cottonwood Triangular	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Desert Side-notched	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978

Rose Springs Series	
Corner-notched	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978, Jennings 1978
Expanding-stem	Jennings 1978
Contracting-stem	Heizer & Baumhoff 1961, Heizer & Hester 1978
Side-notched	Jennings 1978
Eastgate Series	
Expanding-stem	Heizer & Baumhoff 1961, Fowler 1968a & 1968b, Heizer & Hester 1978
Split-stem	Heizer & Baumhoff 1961, Fowler 1968a, Heizer & Hester & Hester 1978
Fremont	
Paragonah Phase	
Parowan Basal-notched	Jennings 1978
Side-notched	Jennings 1978
Corner-notched	Jennings 1978
White Rocks Phase	
Side-notched	Jennings 1978

PLATEAU-INTERMOUNTAIN SEQUENCES

Clovis	Butler 1970a
Folsom	Campbell 1956, Swanson 1961, Butler 1970a & 1970b
Midland	Butler 1970b
Agate Basin	Kehoe 1955, Swanson 1961, Butler 1962, Swanson & Ranere 1970
Plainview	Butler 1962, Swanson & Ranere 1970
Milnesand	Swanson <u>et al.</u> 1964b
Alberta	Swanson 1961, Swanson <u>et al.</u> 1964b, Butler 1970a
Cody Complex	
Scottsbluff I	Butler 1970a
Eden	Swanson 1961
Lind Coulee	Daugherty 1956, Butler 1969, Leonhardy & Rice 1970
Birch Creek	
Type A	Butler 1966
Type B	Swanson <u>et al.</u> 1969
Windust Phase	Daugherty 1956, Leonhardy & Rice 1970
Terminal Paleo-Indian	
Lanceolate I	Swanson <u>et al.</u> 1964b, Butler 1970b
Lanceolate II	Swanson <u>et al.</u> 1964b
McKean-like Lanceolate	Warren <u>et al.</u> 1968
Elko-Bitterroot Series	
Bitterroot (Northern)	
Side-notched	Butler 1962, 1966, 1970a & 1970b, Gruhn 1964, Swanson <u>et al.</u> 1964b, Sneed 1967, Warren <u>et</u> <u>al.</u> 1968, Swanson <u>et al.</u> 1969, Swanson & Sneed 1969, Swanson & Sneed 1971
Salmon River variant	Swanson <u>et al.</u> 1964b, Swanson <u>et al.</u> 1969

Cascade Phase	
Cascade Point	Butler 1962 & 1966, Lynch <u>et al.</u> 1965, Leonhardy & Rice 1970
Cold Springs Side-notched	Leonhardy & Rice 1970
Haskett	
Type 1	Gruhn 1964, Butler 1965, 1967, 1969, 1970a & 1970b, Warren <u>et al.</u> 1968, Swanson & Ranere 1970
Type 2	Butler 1965, Swanson & Sneed 1969
Black Rock-Humboldt-McKean-Pinto Basin Series	
Black Rock Concave Base	Weide & Weide 1969
Humboldt Concave Base	Butler 1968 & 1970a
Humboldt Basal-notched	Kehoe 1955, Butler 1970a
McKean Lanceolate	Gruhn 1961a, Swanson <u>et al.</u> 1964b, Butler 1966
McKean-Humboldt-Pinto Basin	Gruhn 1964, Butler 1970a
Pinto Basin	
Barbed	Swanson <u>et al.</u> 1964b, Butler 1970a
Shoulderless	Butler 1970a
Willow-leaf	Butler 1968
Square-shoulder	Swanson <u>et al.</u> 1969, Butler 1970a, Swanson & Ranere 1970
Sloping-shoulder	Swanson <u>et al.</u> 1964b, Butler 1968 & 1970a, Warren <u>et al.</u> 1968, Swanson <u>et al.</u> 1969
Tucannon Phase	
Corner-notched	Leonhardy & Rice 1970
Contracting-stem	Leonhardy & Rice 1970
Elko-Bitterroot Series (cont.)	
Elko	
Corner-notched	Swanson <u>et al.</u> 1964b, Swanson & Sneed 1969, Butler 1970a, 1970b & 1971
Contracting-stem	Butler 1971
Eared	Butler 1970a & 1970b
Harder Phase	
Snake River Corner-notched	Leonhardy & Rice 1970
early Columbia Valley Corner-notched	Warren 1968, Leonhardy & Rice 1970
Avonlea	Butler 1970b
Desert Complex	
Cottonwood Triangular	Butler 1970b
Desert Side-notched	
General variety	Swanson <u>et al.</u> 1969, Butler 1971
Redding variety	Warren <u>et al.</u> 1968, Butler 1970b & 1971
Sierra variety	Gruhn 1961a, Butler 1966, 1970b & 1971, Sneed 1967
Delta variety	Swanson <u>et al.</u> 1964, Butler 1971
Eastgate Series	
Expanding-stem	Warren <u>et al.</u> 1968
Split-stem	Warren <u>et al.</u> 1968

Piquin Phase

unnamed side-notched Leonhardy & Rice 1970

Columbia Valley Corner-notched

Middle Columbia Basal-notched

Warren 1968, Lynch et al. 1965, Gaarder 1967, Warren et al. 1968, Leonhardy & Rice 1970

Hermit variety

Lynch et al. 1965

Wallula Rectangular-stem

Butler 1966 & 1971, Gaarder 1967, Leonhardy & Rice 1970

North Fork variety

Lynch et al. 1965

