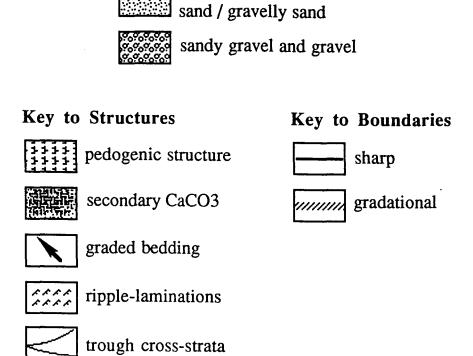


Figure A. Detailed map of Eagle Lake Alloformation type area, showing locations of measured sections included in data repository and main text. Map base USGS topographic maps of the Altair and Eagle Lake, Texas 7.5 minute quadrangles (scale 1:24,000).



Key to Textures

mud drapes

sandy mud

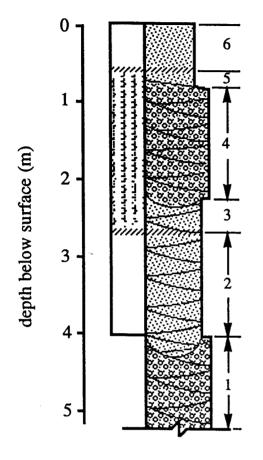
sandy loam / loamy sand

fine sandy / silty sand

medium sand / coarse

Figure B. Key to symbols used in measured sections, Figures C-E, and Figures G-L.

#### MEASURED SECTION ELA 1



6. E horizon developed in chute bar / point bar facies; medium sand, light brownish gray (10YR 6/3), massive and single grain, non-calcareous, roots and burrows

#### gradational contact

5. Bt horizon developed in chute bar / point bar facies; sandy clay, red (2.5YR 5/6), argillans complexed with hematite continuously coat framework grains, strong coarse blocky, non-calcareous, few fine manganese nodules (up to 0.25 cm in diameter), roots and burrows

# sharp contact

4. Bt horizon developed in chute bar / point bar facies; gravels with finer than 2mm matrix of sandy clay, red (2.5YR 5/6), argillans complexed with hematite continuously coat framework grains, strong coarse blocky, non-calcareous;

#### sharp contact

3. Bt horizon developed in chute bar / point bar facies; gravelly sands with finer than 2mm matrix of sandy clay to clayey sand, yellowish red (5YR 5/6), strong coarse blocky, non-calcareous;

### gradational contact

2. chute bar / point bar facies; medium to coarse sand with trough cross-strata, reddish brown (5YR 4/4) weak coarse blocky, non-calcareous, oxidized;

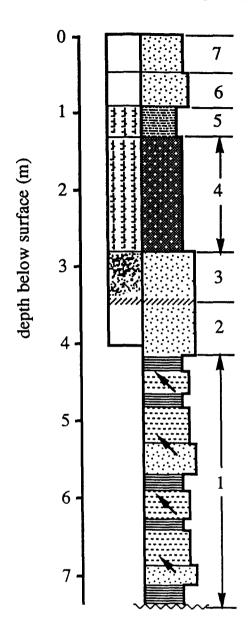
#### sharp contact

1. chute bar / channel bar facies; sandy gravels, trough cross-strata and horizontal bedding, non-calcareous, oxidized

# base of exposure in gravel quarry

Figure C. Measured section ELA-1 (location shown in Figure A) at the type area near town of Eagle Lake, illustrating typical exposure of gravelly and sandy point bar facies, as well as upper boundary to ELA still exposed as terrace surface.

# **MEASURED SECTION ELA 2**



7. Terrace veneer facies; fine sandy silt to silty fine sand; yellowish brown (10YR 5/4), massive, calcareous, roots and burrows;

# <u>DISCONFORMITY</u> (Columbus Bend Allomember 3 over Eagle Lake Alloformation)

6. 2Eb horizon developed in distal point bar or sandy floodplain facies; medium sand, light brownish gray (10YR 6/3), massive and single grain, non-calcareous, roots and burrows

#### sharp contact

5. 2Btb horizon developed in distal point bar or sandy floodplain facies; sandy clay, red (2.5YR 5/6), argillans complexed with hematite continuously coat framework grains, strong fine blocky, non-calcareous, mangans coating ped faces, and few fine manganese nodules (up to 0.25 cm in diameter) in peds;

## sharp contact

4. 2Btb horizon developed in distal point bar or sandy floodplain facies; sandy clay, red (2.5YR 5/6), argillans complexed with hematite continuously coat framework grains, strong fine blocky, non-calcareous, mangans coating ped faces,

# sharp contact

3. 2Bkb horizon developed in distal point bar / floodplain facies; loamy fine sands, yellowish red (5YR 5/6), weak coarse blocky, calcareous with nodules of CaCO3 comprising 5-20 of matrix;

# gradational contact

2. 2Cb horizon developed in distal point bar / floodplain facies; fine sandy silt, yellowish red (5YR 5/6) weak coarse blocky, calcareous with filaments of CaCO3 permeating ped faces, oxidized;

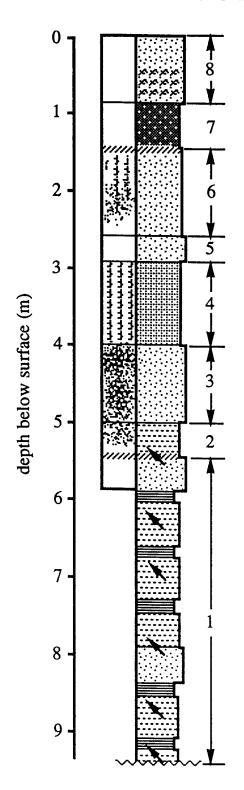
# sharp contact

1. Channel fill / swale fill facies; graded couplets of interbedded fine sands / muddy sands and muds, calcareous with carbonate cements increasing in downwards direction, oxidized;

### water table in gravel quarry

Figure D. Measured section ELA-2 (location shown in Figure A) at the type area near town of Eagle Lake, illustrating typical exposure of sandy point bar and floodplain facies overlying channel fill facies, as well as upper boundary to ELA buried by thin veneer from CBA-3.

### **MEASURED SECTION ELA 3**



8. Terrace veneer facies; fine sandy silt to silty fine sand; yellowish brown (10YR 5/4), ripple-laminated to massive, calcareous, roots and burrows;

# **DISCONFORMITY (CBA-3 over CBA-2)**

7. 2Ab horizon developed in terrace veneer facies; sandy loam, dark grayish brown (10YR 4/3), massive to fine granular, calcareous, roots and burrows;

#### gradational contact

6. 2Bkb horizon developed in terrace veneer facies; loamy fine sand, strong brown (7.5YR 4/4), moderate coarse blocky, calcareous with films and small nodules of CaCO3 comprising less than 10% of matrix;

# DISCONFORMITY (CBA-2 over Eagle Lake Alloformation)

5. 3Eb horizon developed in distal point bar or sandy floodplain facies; loamy fine sand, pale brown (10YR 6/3), massive, mildly calcareous;

#### sharp contact

4. 3Btb horizon developed in distal point bar or floodplain facies; sandy clay, red (2.5YR 5/6) to yellowish red (5YR 5/6), argillans complexed with hematite continuously coat framework grains, strong fine blocky, mildly-calcareous;

#### sharp contact

3. 3Bkb horizon developed in distal point bar / floodplain facies; loamy fine sands, yellowish red (5YR 5/6), weak coarse blocky, calcareous with films and nodules of CaCO3 (up to 1 cm in diameter) comprising 10-20 of matrix;

#### sharp contact

2. 3Bkb horizon developed in channel fill / swale fill facies; fine sandy silt, yellowish red (5YR 5/6) weak coarse blocky, calcareous with films and nodules of CaCO3 (up to 0.5 cm in diameter) comprising less than 10% of matrix;

# gradational contact

1. Channel fill / swale fill facies; graded couplets of interbedded fine sands / muddy sands and muds, calcareous with carbonate cements increasing in downwards direction;

#### Lower Colorado River channel

Figure E. Measured section ELA-3 (location shown in Figure A) at the type area near town of Eagle Lake, illustrating typical exposure of sandy point bar and floodplain facies overlying channel fill facies, as well as upper boundary to ELA buried by overbank facies from CBA-2 and a thin veneer from CBA-3.

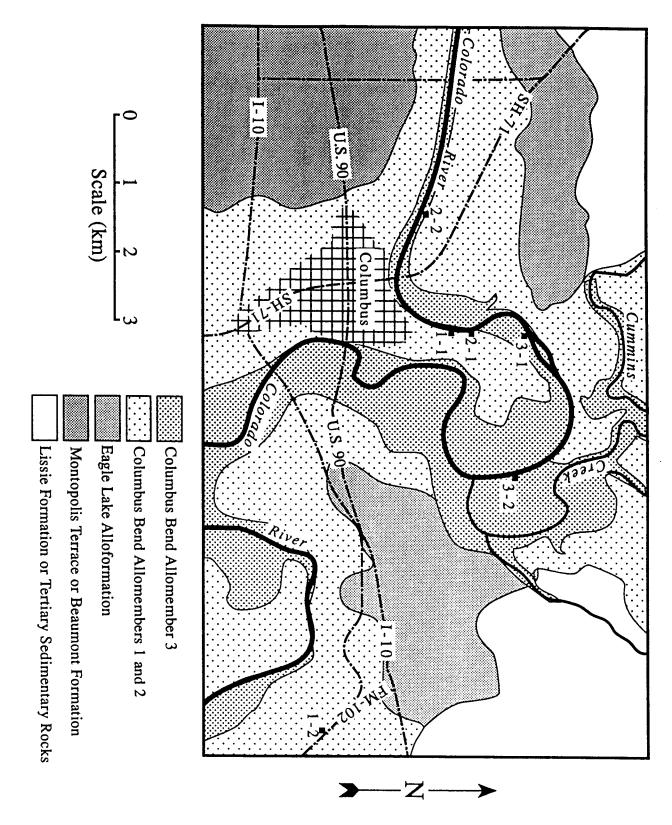
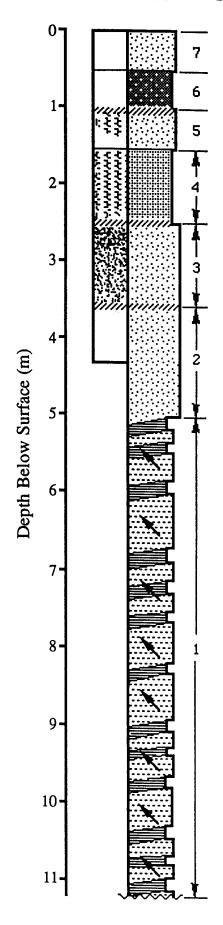


Figure F. Detailed map of Columbus Bend Alloformation type area, showing locations of measured sections included in data repository and main text. Map base USGS topographic maps of the Columbus, Texas 7.5 minute quadrangles (scale 1:24,000).



7. Terrace veneer facies; fine sands, yellowish brown (10YR 4/6), massive, calcareous;

### **DISCONFORMITY (CBA-3 over CBA-2)**

6. 2Ab horizon developed in terrace veneer facies; fine sandy loam, dark grayish brown (10YR 4/2), massive to weak granular, calcareous with filaments of CaCO3 on ped faces and along root traces, roots and burrows;

#### gradational contact

5. 2Bk horizon developed in terrace veneer facies; fine sands, strong brown (7.5YR 4/4), weak coarse blocky, calcareous with films and filaments of CaCO3 on ped faces, roots and burrows;

### **DISCONFORMITY** (CBA-2 over CBA-1)

4. 3Btb horizon developed in floodplain facies; clayey sand, reddish brown (5YR 4/4), strong coarse blocky, calcareous with films of CaCO3 on ped faces;

#### sharp contact

3. 3Bkb horizon developed in floodplain facies; loamy sand, yellowish red (5YR 5/4), weak coarse blocky, calcareous with films and nodules of CaCO3 (up to 1 cm in diameter) comprising 15-20% of matrix;

#### gradational contact

2. Floodplain facies; fine sands, yellowish red (5YR 5/6), weak coarse blocky to massive, calcareous with few films of CaCO3;

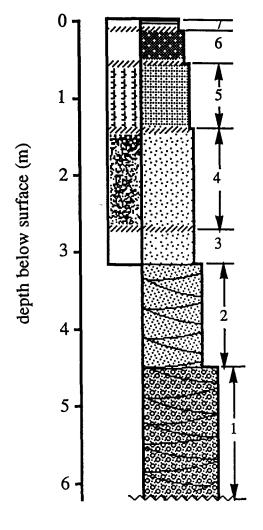
#### sharp contact

1. Swale fill / low relief channel margin facies; graded couplets of interbedded muddy sands and muds, reddish brown (5YR 4/4), massive to weakly laminated, calcareous, gastropod and bivalve faunas, horizontally and vertically oriented CaCO3 concretions concentrated at bottom of section.

#### low water channel

Figure G. Measured section CBA-1-1 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-1 overlain by floodplain facies, which are in turn overlain by terrace veneer facies of CBA-2 and CBA-3.

### **MEASURED SECTION CBA-1-2**



7. terrace veneer facies; clayey silt, dark brown (7.5 YR 3/3), massive, calcareous, strongly bioturbated

### DISCONFORMITY (CBA-2 or 3 over CBA-1

6. 2Ab horizon developed in floodplain facies; sandy loam, dark grayish brown (10YR 3/2), massive to fine granular, mildy calcareous, roots and burrows

#### gradational contact

5. 2Btb horizon developed in floodplain facies; clayey sand, reddish brown (5 YR 4/4), strong coarse blocky, mildy calcareous to non-calcareous, roots and burrows

#### gradational contact

4. 2Bkb horizon developed in floodplain facies; fine sand, yellowish red (5YR 5/6), massive to weak coarse blocky, calcareous with films and nodules of CaCO3 (up to 1 cm in diameter) comprising 20-30% of matrix

#### sharp contact

3. 2Coxb horizon developed in floodplain facies; fine sand, yellowish red (5YR 5/6), massive, calcareous with films of CaCO3 comprising 5-15% of matrix

#### sharp contact

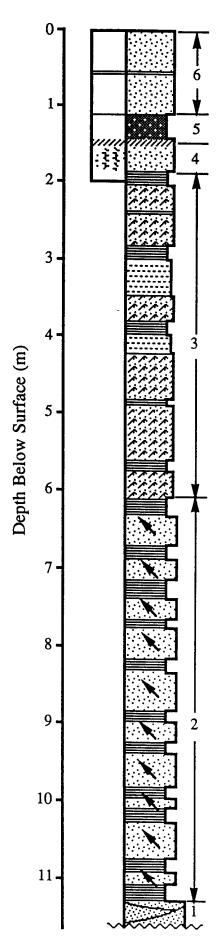
2. chute bar / point bar facies; medium to coarse sand, trough cross-strata, calcareous, oxidized

#### sharp contact

1. chute bar / channel bar facies; sandy gravels, trough cross-strata and horizontal bedding, oxidized

### water table

Figure H. Measured section CBA-1-2 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-1 overlain by floodplain facies, which are in turn overlain by very thin increment of terrace veneer facies from CBA-2 or CBA-3.



6. Terrace veneer facies; fine sands with few mud drapes, yellowish brown (10YR 4/6), massive, calcareous;

# **DISCONFORMITY (CBA-3 over CBA-2)**

5. Truncated 2Ab horizon developed in floodplain facies; sandy loam, dark grayish brown (10YR 4/2) massive, calcareous, roots and burrows;

#### gradational contact

4. 2Bwb horizon developed in floodplain facies; loamy sand, strong brown (7.5YR 4/4), weak to moderate coarse blocky, calcareous with very few filaments and films of CaCO3, roots and burrows;

### gradational contact

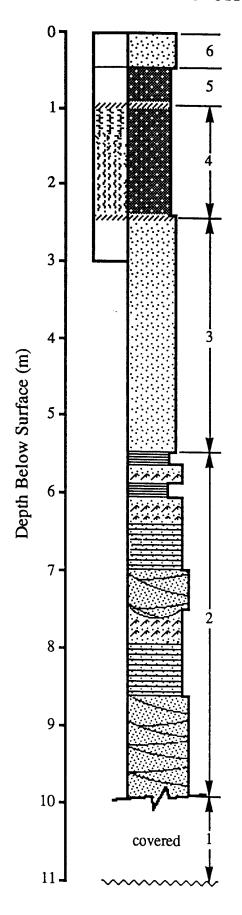
3. Floodplain facies; fine sands with ripple laminations interbedded with graded couplets of massive sandy mud and mud, calcareous, abundant gastropod fauna;

#### sharp contact

- 2. Low relief channel margin facies; graded couplets of fine sands and muds, mostly massive but with occasional ripple laminations;
- 1. Chute bar / channel bar facies; coarse sands, trough cross-strata.

#### low water channel

Figure I. Measured section CBA-2-1 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-2 overlain by floodplain facies, which are in turn overlain by terrace veneer facies from CBA-3.



6. Terrace veneer facies; fine sands, yellowish brown (10YR 4/6), massive, calcareous;

# **DISCONFORMITY (CBA-3 over CBA-2)**

5. 2Ab horizon developed in floodplain facies; sandy loam, dark grayish brown (10YR 4/2) massive to weak coarse granular, calcareous, roots and burrows;

# sharp contact

4. 2Bkb horizon developed in floodplain facies; loamy sand, strong brown (7.5YR 4/4) to yellowish red (5YR 5/4), weak to moderate coarse blocky, calcareous with filaments and films of CaCO3 comprising 5-15% of matrix, roots and burrows;

#### gradational contact

3. Floodplain facies; fine sands, yellowish red (5YR 5/6), weak coarse blocky to massive, calcareous with few films of CaCO3;

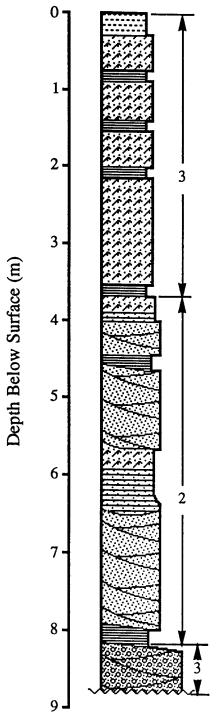
### sharp contact

- 2. Chute bar / point bar facies; sets of trough cross-stratified medium to coarse sands and fine sands with plane beds and ripple-laminations, occasional interbedded mud drapes;
- 1. Covered by slope wash.

#### low water channel

Figure J. Measured section CBA-2-2 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-2 overlain by floodplain facies, which are in turn overlain by terrace veneer facies from CBA-3.

# **MEASURED SECTION CBA-3-1**



3. Floodplain facies; fine sands with ripple laminations and occasional interbedded mud drapes, mud drapes contain abundant gastropod fauna.

# sharp contact

2. Chute bar facies; sets of coarse sands with trough cross-strata and medium to fine sands with plane beds and ripple laminations, with occasional interbedded mud drapes;

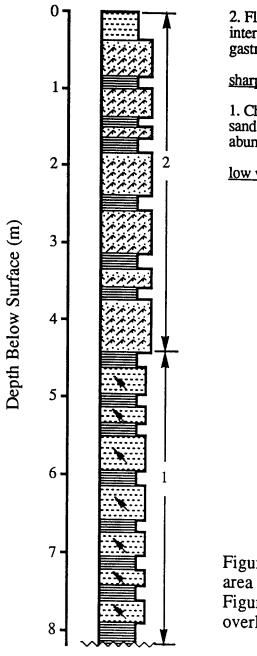
# sharp contact

1. Basal gravelly facies; sandy gravels and gravelly sands, horizontal bedding with imbrication and some large-scale trough cross-strata.

# low water channel

Figure K. Measured section CBA-3-1 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-3 overlain by floodplain facies.

# **MEASURED SECTION CBA-3-2**



2. Floodplain facies; fine sands with ripple laminations and interbedded mud drapes, mud drapes contain abundant gastropod fauna.

# sharp contact

1. Channel fill / swale fill facies; couplets of graded muddy sands and sandy muds with interbedded mud drapes, abundant gastropod fauna.

### low water channel

Figure L. Measured section CBA-3-2 at the type area near town of Columbus (location shown in Figure F), illustrating channel facies of CBA-3 overlain by floodplain facies.