Errata, Ryan "Environmental and Low Temperature Geochemistry"

The following error is listed first because it is pretty critical:

p. 21, Table 1.3:
pK_a should be changed to $\log(K_a)$

Cover/title page
Leaching is the correct spelling for the process describing removal of soluble species in solution (in this case, Fe and other metals are *leached* from mine tailings into surface water).

p.10, upper left:
In the Al calculation, text should read: "1 mol of Al = ***26.98*** g; ***26.98*** g/mol * 1 mol/kg = ***26.98*** g/kg Al …

p. 98, left column, add comma to end of this phrase: "Compounds in the upper rows of Table 3.4, especially those with log $[K_{OW}] > 4$, …"

p. 133, upper left, line 5:
Figure call-out here should be for Fig. 4.12 rather than 4.13.

p. 135, lower right:
"(***note*** presence of pyrite…"

p. 136, upper left:
"… Al is more soluble in high pH solutions than ***is*** iron."

p. 158, Table 5.2 and explanation below:
The stability of dolomite is overstated in the text below Table 5.2. Given that dolomite has two moles of CO_2 per mole of dolomite, the better comparison of the relative solubilities of dolomite to the other carbonates listed would be do divide the K_{sp} of dolomite by 2 (producing a $K_{sp} = 10^{-9.08}$). In this sense, dolomite is predicted to be more soluble than magnesite, calcite and aragonite, but less soluble than rhodochrosite and siderite.

Page 178, plates 15 and 16: The figure caption for Plate 15 should say "Average annual sulfate concentrations…" and Plate 16 should say "Average annual nitrate concentrations…". i.e. the plate caption texts are reversed for plates 15 and 16.

p. 260, Figure 9.1: Epidote is a silicate mineral.

p. 264, in AMD box. Slight typo in SO_4^{-2}.

p. 270: There is a period missing at the end of 2nd bulleted point.

p. 283, upper right, line 3: ~~of~~ on Al.

p. 287, right column below Ni>Cd etc … "(although in reality ~~the plot for~~ Cr^{+6} in the polyatomic …")

p. 294, right column, line 3, paragraph 2: "(POC, humus) and, ~~to~~ usually to a much lower…"

p. 304: add to end of footnote *a*: "VSMOW (Vienna-SMOW) is the currently accepted standard although many researchers still use the term "SMOW".

p. 305: Right column, 6 lines up from bottom of page: greater is misspelled as "xgreater".

P. 307: immediately above 10.3.3, right column: "…stable isotope~~s~~ geochemists" (delete "s" from isotopes).

p. 308, end of paragraph 1: close parenthesis at end of paragraph.

p. 315: Left column, add space so that $CaSO_4 \cdot 2H_2O$ appears as such.

p. 330, left column (10.8.5). "One field to which **Ch** isotopes …" should be ""One field to which Cl isotopes … "

p. 335, left column, lines 10-11: "… ^{40}Ca mentioned in Figure 10.18 caption)."

p. 342, upper left: "… output from Canada, Europe, Asia and USA."

p. 355, caption 11.9. nucleus should be changed to neutron. "… where a neutron (produced by cosmic radiation…)".

p. 357, right bottom paragraph: add "not" : "Minerals at depths greater than 1 m do <u>not</u> receive …"

p. 362, upper right, formatting: "… fluid flow in sedimentary basins (Clauer et al., 2003)."

p. 375, right column (below caption for Fig I.3):
"… iron hydroxide precipitates ~~at~~ in sediments at …"