Darrellhenryite  

**Na(LiAl₂)Al₆(BO₃)₃Si₆O₁₈(OH)₃O**

**Crystal Data:** Hexagonal.  
**Point Group:** 3m.  
As columnar crystals to 3 cm, sometimes in parallel aggregates.

**Physical Properties:**  
Cleavage: None.  
Fracture: Conchoidal.  
Tenacity: Brittle.  
Hardness = ~ 7  
D(meas.) = 3.03(3)  
D(calc.) = 3.038  

**Optical Properties:**  
Translucent to transparent.  
Color: Pink, colorless in transmitted light.  
Streak: Pinkish white.  
Luster: Vitreous.  
Optical Class: Uniaxial (−).  
α = 1.636(2)  
ε = 1.619(2)  
Pleochroism: Distinct, colorless to pale pink.

**Cell Data:**  
**Space Group:** R₃m.  
a = 15.809(2)  
c = 7.089(1)  
Z = 3  

**X-ray Powder Pattern:** Nová Ves near Český Krumlov, southern Bohemia, Czech Republic.  
2.925 (100), 2.555 (90), 3.431 (73), 3.952 (54), 1.901 (50), 1.643 (49), 2.326 (42)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>38.38</td>
<td>38.12</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>43.49</td>
<td>43.12</td>
</tr>
<tr>
<td>B₂O₃</td>
<td>11.01</td>
<td>11.04</td>
</tr>
<tr>
<td>MnO</td>
<td>0.02</td>
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<tr>
<td>CaO</td>
<td>0.05</td>
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<tr>
<td>Li₂O</td>
<td>1.63</td>
<td>1.58</td>
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<tr>
<td>Na₂O</td>
<td>1.92</td>
<td>3.28</td>
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<tr>
<td>H₂O</td>
<td>2.86</td>
<td>2.86</td>
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<tr>
<td>F</td>
<td>0.71</td>
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<tr>
<td>Total</td>
<td>99.77</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Nová Ves, near Český Krumlov, southern Bohemia, Czech Republic; average of 13 electron microprobe analyses supplemented by LA-ICP-MS (Li₂O), TGA, near-infrared spectroscopy, H₂O and B₂O₃ by wet chemical analysis; corresponds to \( ^{6}(Na_{0.58}Ca_{0.41})Σ_{2}^{1.00}(Li_{0.55}Al_{0.55})Σ_{2}^{1.00}Al_{6}(BO_{3})_{5}(Si_{6}O_{18})^{3}(OH)_{3}^{W}(O_{0.69}F_{0.31})Σ_{2}^{1.00} \) and \( ^{7}(NaLiAl)_{2}Al_{6}(BO_{3})_{3}Si_{6}O_{18}(OH)_{3}O \).

**Polymorphism & Series:** Related to elbaite through the substitution \(^{6}Al^{W}_{0.5}O_{3}^{W}Li^{W}_{-0.5}(OH)_{3}^{W} \).

**Mineral Group:** Tourmaline supergroup, alkali-subgroup 4.

**Occurrence:** In the central part of a zoned complex, Li-bearing, petalite-type pegmatite dike.

**Association:** Lepidolite, Li-bearing tourmalines, amblygonite, albite, K-feldspar, quartz, petalite, polythionite, pollucite.

**Distribution:** From Nová Ves, near Český Krumlov, southern Bohemia, Czech Republic.

**Name:** Honors Darrell J. Henry (b. 1951), Professor of Geology, Louisiana State University, Baton Rouge, USA, and an expert on the mineralogy, petrology, crystal chemistry, and nomenclature of tourmaline-supergroup minerals.

**Type Material:** Department of Mineralogy and Petrography, Moravian Museum, Brno, Czech Republic (B10661) and the National Museum of Natural History, Washington D.C., USA (NMNH 175992 and 175993).